

FARM FINANCIAL RECORD STUDIES 1941



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FARM FINANCIAL RECORDS

Prepared by the Department of Agricultural Economics
of the University of Illinois

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FOREWORD

This issue of *Illinois Farm Economics* is devoted to an analysis of 3,090 farm records which were kept throughout Illinois during 1941. It also includes some comparisons of earnings for 1941 with those of previous years.

Illinois farmers have cooperated with the University of Illinois in keeping financial and production records of their farms for more than 25 years. These records have become more useful as more and more farmers have kept them and as they have been continued over a longer period of years. The greater value from these records is that of helping farmers who keep them to study their own business. As the records are kept over a period of years, they provide a basis for making changes which will improve the farm earnings and enable each individual to compare his farming operations with those of others who are farming under similar conditions.

Another value of the records is that of studying farm earnings from year to year on the same or similar farms as a means of showing the year-to-year changes in the financial condition of farmers. A comparison of the prices of things farmers buy and sell helps to accomplish this purpose, but farming is so complex, with the sources of income and the character of expenses varying widely on farms of different types, that farm records provide the most satisfactory basis for such comparisons.

A third value to be gained from the records is that of showing how the investments, incomes, expenses, earnings, yields, and sources of income vary in different parts of the state due to such factors as soil differences, size of farms, type of farming, climatic conditions, and available markets. The records also show the influence of variations within type-of-farming areas in quality of soil, size of farm, and type of organization on crop yields, capital investments, and earnings.

The Illinois Farm Account Book, if properly used, contains all of the information needed to file an income tax report on the farm business on either the cash or the accrual basis. The record when summarized provides totals which may be transferred to the tax form with a minimum of time and effort.

11. C. M. CASE

SUMMARY OF FARM BUSINESS REPORTS OF 3,090 FARMS IN ILLINOIS FOR 1941

P. E. JOHNSTON, J. B. CUNNINGHAM, AND M. L. MOSHER

The average net cash income an acre for Illinois accounting farms was higher in 1941 than in any other year since World War I. The average net cash income of \$9.91 an acre for 1941 compared with \$6.82 for 1940, \$7.40 for 1936, \$7.78 for 1929, and an average of \$5.30 for the years 1934, 1935, 1937, 1938, and 1939, a group of years when earnings were practically the same (Fig. 1).

The average cash income an acre for Illinois accounting farms was as follows for the successive years 1927-1941:

1927.....	\$5.80	1932.....	\$1.47	1937.....	\$5.33
1928.....	6.22	1933.....	3.00	1938.....	5.25
1929.....	7.78	1934.....	5.40	1939.....	5.40
1930.....	6.22	1935.....	5.14	1940.....	6.82
1931.....	2.69	1936.....	7.40	1941.....	9.91

The net cash income an acre was computed by subtracting the value of unpaid labor from the cash balance for the year and by dividing that difference by the number of acres on the farms. In order to calculate the state averages, farming-type area averages were weighted by the acres of land in the farms (census) in each farming-type area.

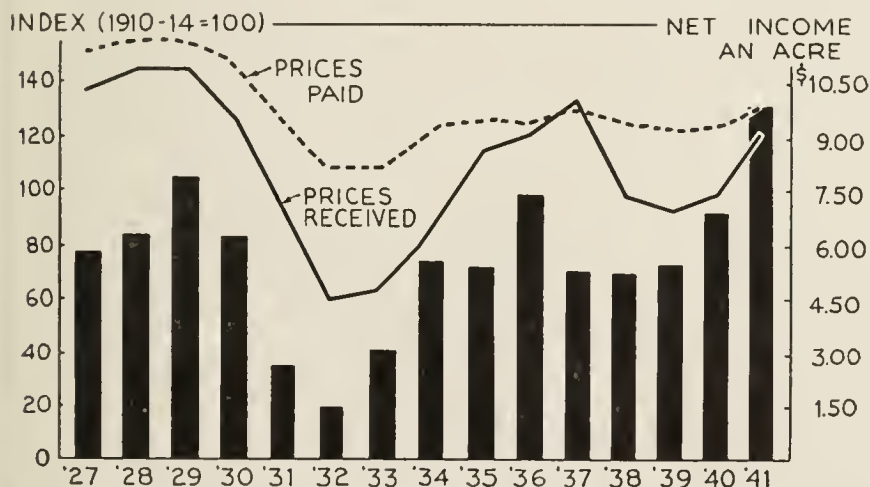


FIG. 1.—AVERAGE NET CASH INCOME AN ACRE (UNPAID LABOR DEDUCTED) ON ILLINOIS ACCOUNTING FARMS, PRICES PAID BY FARMERS IN THE UNITED STATES, AND PRICES RECEIVED BY ILLINOIS FARMERS, 1927-1941

These returns do not include the inventory changes or the money value of food, fuel, and other items of living, all of which are secured from the farm. The net cash income an acre is one of the best measures for comparing incomes of groups of farms over a period of years, or for contrasting the level of income for different type-of-farming areas, because it is not influenced by changes in the inventory of land. During any period of years, earnings fluctuate more widely from year to year when inventory changes are included, since there are usually inventory losses when prices are declining and inventory increases when prices are rising.

Effect of large production and high prices on earnings. Farm incomes were much higher in 1941 than in 1936 or 1937, years in which price ratios were more favorable to farmers than in 1941. In 1936, the ratio of prices received by Illinois farmers to prices paid for supplies was 97 percent of the 1910-1914 ratio, and in 1937, it was 102 percent (Fig. 1). In 1941, Illinois farm prices advanced more than the prices paid, and the ratio which averaged 79 in 1940 advanced to an average of 93 in 1941.

Why, then, should the net income an acre be so much larger in 1941 than in the years when the price ratios were more favorable? The answer is simply that the level of both domestic and foreign demand was high in 1941, and farmers for the first time since World War I were able to sell a large volume of products at high prices.

We have had years of low volume of sales, as 1937, when prices were high but there was little to sell, and we have had years like 1939 when a large volume of products was sold at relatively low prices. The effect of both of these combinations was a fairly low level of farm incomes. In 1936, a fair volume of products was marketed at good prices, but 1941 is the only year since 1920 when a large volume of products was sold for high prices.

The demand for farm products is important in determining price. In 1941, the level of industrial production in the United States was 44 percent above that for 1939 and 38 percent above that for 1937. In addition, lend-lease activities were important in 1941, and large quantities of farm products were taken from the domestic market for shipment abroad. This was particularly true for hogs, eggs, and dairy products. In 1941, the Agricultural Marketing Administration purchased for export the pork from 3.6 million hogs and the lard from 10.2 million hogs.

With a strong domestic demand resulting from the high incomes of

city workers, and with a stronger foreign demand, the large volume of agricultural products was sold at increasing prices. As a result, the average cash income per farm on accounting farms advanced from \$6,334 a farm in 1940 to \$8,002 a farm in 1941. When inventory changes were included, the gross income per farm increased from \$6,875 a farm in 1940 to \$10,084 a farm in 1941, a 47-percent increase.

These data indicate clearly that farm incomes are increased much more by a rise in price which results from an increase in demand than from one which results from a decline in production. This fact should be kept in mind by those who plan agricultural programs which are designed to improve farm incomes.

Volume of production on efficient, large-scale farms. The maximum production of farm products was called for in 1941 and should be continued for the duration of the war. The response of the operators of large-scale, efficient farms is indicated for 1941 by an analysis of 600 central Illinois Farm Bureau Farm Management Service records. The average increase per farm in 1941 over that for 1940 was as follows:

<i>Product</i>	<i>1940 volume</i>	<i>1941 volume</i>	<i>Percentage increase</i>
Pork (pounds).....	33 028	38 066	15
Beef (pounds).....	18 812	20 878	11
Milk (pounds).....	44 427	47 546	7
Eggs (dozens).....	1 068	1 255	18
Grain (tons).....	181	218	20

The production per worker was 112.9 tons of grain and 28.5 tons of livestock and livestock products on these farms in 1941.

A study of 96 representative farms in McHenry County for 1940 and 1941 indicates that the percentage increase in milk production was higher on the large farms than on the small ones. From 1940 to 1941, there was a 2.5-percent increase in milk production on owner-operated and part-owner-operated farms with less than 550 man work units per farm, but a 11.2-percent increase on the farms with more than 550 man work units. Tenants with less than 550 man work units per farm increased their milk production 6.7 percent, while tenants on larger farms increased theirs 17.9 percent.

On an equal number of farms, 84 percent of the total increase in milk production was on the large farms, and only 16 percent on the small ones.¹

Obviously, every farmer, including the operators of small farms,

¹B. D. Parrish and L. J. Norton, *Illinois Farm Economics*, June 1942.

should do his best to increase production during the war period, but those who plan the programs designed to influence production should recognize the fact that a large percentage of the increased production must come from the larger sized family farms that are well equipped with machinery and which have efficient operators.

Accounting farms represent better than average condition. The extent to which the volume of production from accounting farms exceeds that from the average of all farms in each farming-type area is indicated by the following data which give the value of farm products sold, traded, or used by farmers in 1939:

Farming-type areas	Value of products per farm	
	All farms	Accounting farms
1.....	\$2 814	\$4 769
2.....	2 666	6 295
3.....	2 741	7 033
4.....	3 156	6 665
5.....	2 088	5 603
6.....	1 391	3 413
7.....	712	2 821
8.....	1 026	3 131
9.....	787	2 632
Weighted average.....	\$2 174	\$5 220

The following summary is a record of incomes, expenditures, and earnings on Illinois accounting farms for 1941 and is also a record of comparisons of selected items with similar records for other years. *The data contained in this report represent Illinois farm conditions which are better than average because the accounting farms are larger than average, the crop yields are above average, and the farms on the whole are operated with an efficiency which is greater than average.* Records of this type are useful for showing variations in income from year to year and for demonstrating differences between farming-type areas. The variation in income from farm to farm within the groups is shown in Table 3.

Value of farm products used in the household. In the farm business reports published in 1938, 1939, 1940, and 1941, and in the printed tables at the back of this report, the value of farm products used in the household was included as a source of income. In comparing the 1938-1941 records with those for other years, the value of farm products used in the household has been omitted because the data are not available for years prior to 1938. The average values per farm and per acre of farm products used in the household for the various farming-type areas are as follows:

VALUE OF FARM PRODUCTS USED IN HOUSEHOLD, 1939, 1940, AND 1941

Area	Per farm			Per acre		
	1939	1940	1941	1939	1940	1941
Area 1.....	\$241	\$253	\$279	\$1.41	\$1.41	\$1.54
Area 2.....	250	247	276	1.20	1.17	1.33
Area 3.....	260	252	293	1.05	1.01	1.22
Area 4.....	251	236	284	.94	.87	1.07
Area 5.....	256	244	283	.98	.96	1.13
Area 6.....	264	250	282	1.31	1.25	1.32
Area 7.....	254	244	292	1.12	.99	1.18
Area 8.....	239	211	267	1.10	.93	1.21
Area 9.....	229	220	278	1.23	.94	1.20
State average ^a	\$252	\$242	\$284	\$1.09	\$1.02	\$1.20

^aWeighted by the number of census farms in each area.

Cash income per farm. The average cash income and cash expenditures per farm were larger in 1941 than in any year for which comparable records are available (1926).¹

The average cash balance of \$3,019 for 1941 was over three times as large as the average cash balance of \$968 for 1932, the low-income year of the depression (Table 1). The average cash balance for 1941 was \$779 a farm larger than in 1940, but income tax payments must be de-

¹Comparable records are available to 1926 and a limited number, to 1916.

TABLE 1.—SELECTED ITEMS OF INCOME AND EXPENSE ON ACCOUNTING FARMS IN ILLINOIS, 1935-1941^a

Item	1935	1936	1937	1938	1939	1940	1941
Acres per farm.....	216	227	227	232	237	242	239
Cash income per farm.....	\$4 342	\$5 374	\$5 309	\$5 285	\$5 920	\$6 334	\$8 002
Cash expenditures per farm.....	2 605	3 034	3 424	3 421	4 001	4 094	4 983
Cash balance.....	\$1 737	\$2 340	\$1 885	\$1 864	\$1 919	\$2 240	\$3 019
Inventory increase.....	779	802	727	428	1 117	541	2 082
Cash balance plus inventory increase.....	\$2 516	\$3 142	\$2 612	\$2 292	\$3 036	\$2 781	\$5 101
Unpaid labor.....	668	740	733	698	696	691	769
Net farm income.....	\$1 848	\$2 402	\$1 879	\$1 594	\$2 340	\$2 090	\$4 332
Gross receipts per acre ^b	\$17.14	\$19.55	\$18.00	\$16.66	\$19.89	\$19.16	\$30.07
Total expense per acre ^c	8.68	9.06	9.86	9.95	10.26	10.47	11.63
Net receipts per acre ^b	\$ 8.46	\$10.49	\$ 8.14	\$ 6.71	\$ 9.63	\$ 8.69	\$18.44
Net receipts per acre (cash basis).....	\$ 5.14	\$ 7.40	\$ 5.33	\$ 5.25	\$ 5.40	\$ 6.82	\$ 9.91

^aIn this table and in succeeding tables where data are on a farm basis rather than on an acre basis, state averages were obtained by weighting area averages by the number of farms in each area.

^bGross receipts include inventory changes.

^cTotal expense includes unpaid labor.

TABLE 2.—CASH FARM BUSINESS EXPENDITURES ON ILLINOIS ACCOUNTING FARMS, 1935-1941

Nature of expenditures	Average per farm							Percent 1941 is of 1940
	1935	1936	1937	1938	1939	1940	1941	
Farm improvements.....	\$ 185	\$ 212	\$ 274	\$ 314	\$ 368	\$ 368	\$ 389	106
Machinery and equipment	683	841	956	969	961	1 019	1 335	131
Feed and grain	488	612	656	471	634	647	947	146
Crop expense.....	174	205	276	148	144	152	159	105
Hired labor.....	236	261	306	348	371	369	432	117
Taxes	206	231	234	256	272	287	294	102
Livestock and miscellaneous	633	672	722	915	1 251	1 252	1 427	114
Total cash expenses.....	\$2 605	\$3 034	\$3 424	\$3 421	\$4 001	\$4 094	\$4 983	122

ducted from this sum in order to calculate the increase available for farm family living and savings. The increase in cash available for farm family living was small in 1941 compared with the total increase in farm earnings, since a large proportion of the increased earnings was in inventory increases.

Cash farm business expenditures. Illinois accounting farmers spent more money to run their farms in 1941 than in any year of record (since 1926) and probably established an all-time high because farms are larger now and farmers purchase a higher percentage of the materials used to operate their farms. Expenditures averaged 22 percent larger in 1941 than in 1940 and 91 percent larger in 1941 than in 1935 (Table 2). More money was spent in 1941 than in 1940 for all items, with the largest increases for machinery, feed, labor, and livestock.

The average expenditure per farm of \$4,983 in 1941 may be contrasted with an average expenditure of \$1,494 per farm in 1933, the low point for expenditures in the depression period; this increase of 234 percent indicates the farmers' contribution to the upward trend in the demand for the Nation's goods.

The following percentages indicate the increase in expenditures per farm for 1941 over those for 1933: farm improvements, 318 percent; machinery and equipment, 341 percent; feed and grain, 301 percent; crop expense, 16 percent; hired labor, 163 percent; taxes, 16 percent; and livestock and miscellaneous, 331 percent. These increases reflect changes in the price level, changes in the quantities purchased, and changes in the average size of farm.

Inventory increases. The average inventory increase of \$2,082 for 1941 was almost double that of any other year since 1926. Inventory increases have occurred each year since the depression year of 1932, and these annual increases have ranged from \$428 per farm in 1938 to \$2,082 per farm in 1941. The average annual increase for the 9-year period ending in 1941 was \$829 a farm.

An inventory increase indicates that the combined value of livestock, grain, improvements, and machinery was larger at the end of the year than at the beginning. The ending inventory of each year is for the same farms as the beginning inventory, but the farms included in the averages for one year are not exactly the same as those for any other year because some old cooperators are dropped each year and new ones are added.¹

The series of inventory increases for a period of 9 years reflects the increase in prices for farm products, heavy investments in improvements and machinery, and an accumulation of grain and livestock following the drouth of 1934. Enough money has been spent for machinery and improvements so that the value per farm on January 1, 1941, was 75 percent larger for machinery and 18 percent larger for improvements than it was in 1934. Earnings were larger during the last 9 years if inventory changes are included than if calculations are made on a cash basis. On the other hand, inventory losses averaged \$866 a year for the 3 years, 1930-1932. The cash basis more nearly reflects the ability of the farmer to pay his interest, to buy the things that the family needs, and to add something to the savings than does the method of accounting which includes inventory changes. Inventory changes must be included, however, in order to find the net position of the farm business for the year.

Variations in earnings from farm to farm. Earnings for the farms included in each area vary widely. Much of the farm-to-farm variation is due to the managerial ability of the operators and to the manner in which the farms are organized and operated. The records were grouped for this study into high-, medium-, and low-income farms on the basis of the rate earned on investment. The value of farm products used in the household was included as a farm receipt in this tabulation.² The wide variation in rate earned on investment, net earnings per farm, and labor and management earnings indicates the opportunities which some farmers have for improving the income from their farms because these variations are largely due to factors over which the operator has some control (Table 3).

¹A high percentage of the cooperators for one year continues for the next.

²The records for Grundy, LaSalle, Livingston, McLean, Tazewell, and Woodford counties were not available when the averages for Area 4 were calculated.

TABLE 3.—VARIATIONS IN EARNINGS FROM FARM TO FARM BY FARMING-TYPE AREAS, 1941^a

Farming-type area	Level of earnings	Number of farms	Average rate earned on investment	Net earnings per farm	Labor and management earnings
	(rate earned on investment)		(percent)		(per farm)
1	Less than 10.00.....	16	7.6	\$2 330	\$1 304
	10.00 to 15.99.....	37	13.2	4 352	3 300
	16.00 or more.....	32	19.0	5 312	4 563
2	Less than 14.00.....	214	10.6	\$3 931	\$2 685
	14.00 to 17.99.....	132	16.0	5 461	4 371
	18.00 or more.....	170	21.2	6 201	5 363
3	Less than 14.00.....	199	11.2	\$4 355	\$2 994
	14.00 to 17.99.....	196	16.0	6 444	5 030
	18.00 or more.....	199	21.4	7 205	6 123
4	Less than 14.00.....	346	11.0	\$4 475	\$3 034
	14.00 to 17.99.....	223	15.8	7 183	5 494
	18.00 or more.....	134	20.6	8 042	6 718
5	Less than 14.00.....	121	10.2	\$2 863	\$2 055
	14.00 to 18.99.....	123	16.6	4 771	3 918
	19.00 or more.....	118	22.9	6 211	5 474
6	Less than 10.00.....	115	6.1	\$1 176	\$ 697
	10.00 to 14.99.....	103	12.6	2 342	1 889
	15.00 or more.....	89	19.7	3 315	2 976
7	Less than 10.00.....	39	5.4	\$ 699	\$ 487
	10.00 to 14.99.....	34	12.1	1 615	1 385
	15.00 or more.....	48	19.7	3 066	2 798
8	Less than 12.00.....	25	7.5	\$1 036	\$ 758
	12.00 to 19.99.....	37	15.9	2 493	2 206
	20.00 or more.....	18	23.3	3 898	3 551
9	Less than 6.00.....	10	2.2	\$ 288	\$ 115
	6.00 to 13.99.....	14	9.8	1 318	1 053
	14.00 or more.....	10	18.3	1 908	1 872

^aFor a more detailed analysis of variation in earnings, see the 1941 reports for each area.

Influence of Price Changes on Illinois Farm Incomes

Prices of important farm products. Prices of most farm products were higher at the end of 1941 than at the beginning, horses and butterfat being exceptions. The index of all Illinois farm prices averaged 26 percent higher in 1941 than in 1940. The increases for the various groups were as follows: grains, 14 percent; dairy products, 25 percent; meat animals, 39 percent; and chickens and eggs, 26 percent. Fruits decreased 6 percent because of increased competition from citrus fruits and a loss of export demand.

A great deal of the variation in earnings between the different types of farming in Illinois is due to the constantly shifting ratios between the prices of various livestock products and between those of livestock products and grains. During 1941, the price of beef cattle was high, but the price of hogs practically doubled during the year (Fig. 2). In 1941, 14.9 bushels of corn equaled in value 100 pounds of live hog compared

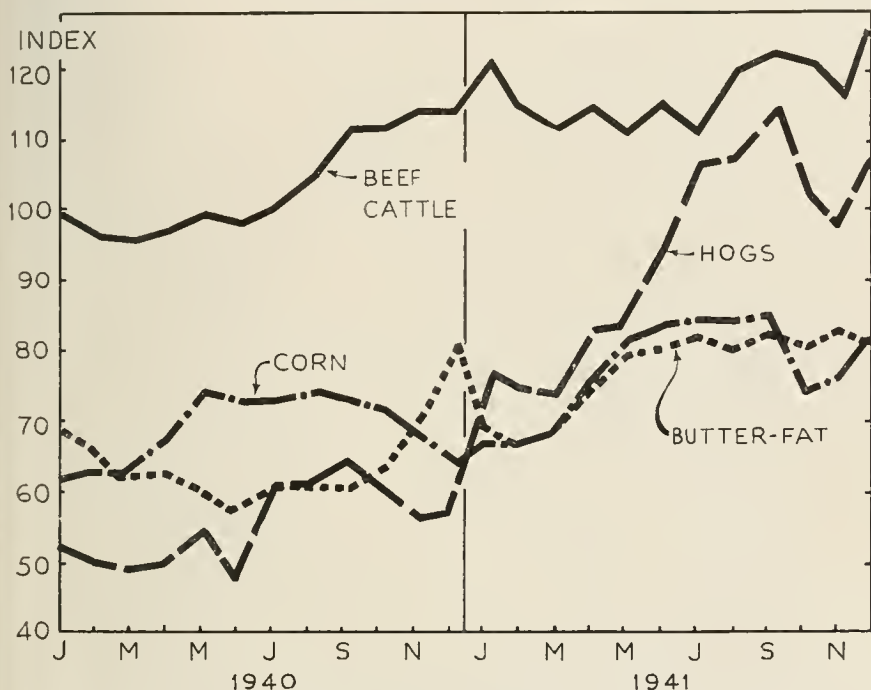


FIG. 2.—INDEXES OF THE AVERAGE MONTHLY ILLINOIS FARM PRICES OF CORN, HOGS, BUTTERFAT, AND BEEF CATTLE, 1940 AND 1941. (1924-1929 = 100)

with an average of 9.9 bushels in 1940. Earnings on hog farms increased in relation to other types of farms, and hog production expanded to record levels.

Farm product	December 15 farm prices		Average yearly farm prices	
	1940	1941	1940	1941
Corn, bu.....	\$.52	\$.66	\$.56	\$.63
Wheat, bu.....	.79	1.14	.81	.93
Oats, bu.....	.33	.47	.32	.36
Barley, bu.....	.49	.70	.46	.55
Soybeans, bu.....	.81	1.48	.82	1.24
Hay, ton.....	7.30	11.40	6.68	8.49
Horses, head.....	74.00	69.00	77.00	68.00
Hogs, cwt.....	5.80	10.70	5.54	9.37
Beef cattle, cwt.....	9.80	10.80	8.84	10.07
Lambs, cwt.....	8.80	10.60	8.52	9.85
Milk cows, head.....	68.00	91.00	65.00	80.00
Milk, cwt.....	2.00	2.50	1.67	2.05
Butterfat, lb.....	.34	.34	.27	.33
Chickens, lb.....	.13	.15	.13	.15
Eggs, doz.....	.27	.32	.17	.22

Variations in supplies. Prices of farm products at inventory time influence farm earnings because all feed, grain, livestock, and other farm property must be valued at the beginning and at the end of the year. The influence is greatest where large stocks are on hand at inventory time. Abundant feed supplies and increasing inventories have characterized the years since the drouth year of 1936. In 1941, the high crop yield resulted in large inventories of feed on most farms. There was an average inventory per farm of 2,942 bushels of corn and 757 bushels of oats on accounting farms on January 1, 1942. This was 357 bushels more corn per farm and 9 bushels more oats per farm than a year earlier. For the state as a whole, the corn reserves on January 1, 1942, were larger than they had been a year earlier. According to the Division of Agricultural Statistics at Springfield, the supplies of the four major grain crops on Illinois farms on January 1, 1941 and 1942 were as follows:

<i>Type of grain</i>	1941 (million bushels)	1942
Corn.....	277	333
Oats.....	95	99
Wheat.....	8	9
Soybeans.....	17	17

Livestock numbers increased rapidly on accounting farms in 1941. The following data indicate the percentage increase in livestock numbers of 3,379 accounting farms during the calendar year 1941:

<i>Type of livestock</i>	1941 (percent of increase)	<i>Type of livestock</i>	1941 (percent of increase)
Milk cows.....	4	Brood sows.....	24
Beef cows.....	14	Spring pigs.....	4
Feeder cattle.....	0	Summer pigs.....	13
Feeder lambs.....	25	Fall pigs.....	23

In 1941, 13.7 litters were farrowed per farm on accounting farms, compared with 12.7 litters in 1940 and 12.0 litters in 1939. All of the increase in 1941 over 1940 was in summer and fall litters.

The increase in milk cows, beef cows, and hogs was general throughout the United States. All cattle numbers and sheep numbers were at record levels on January 1, 1942, and the production of hogs will reach an all-time high this year.

Crop yields in Illinois, 1941. The year 1941 was the fifth consecutive year of high crop yields in Illinois. The weighted average yield of corn, oats, wheat, and soybeans for 1941 was 130 percent of the 10-year average, 1931-1940 (Fig. 3).

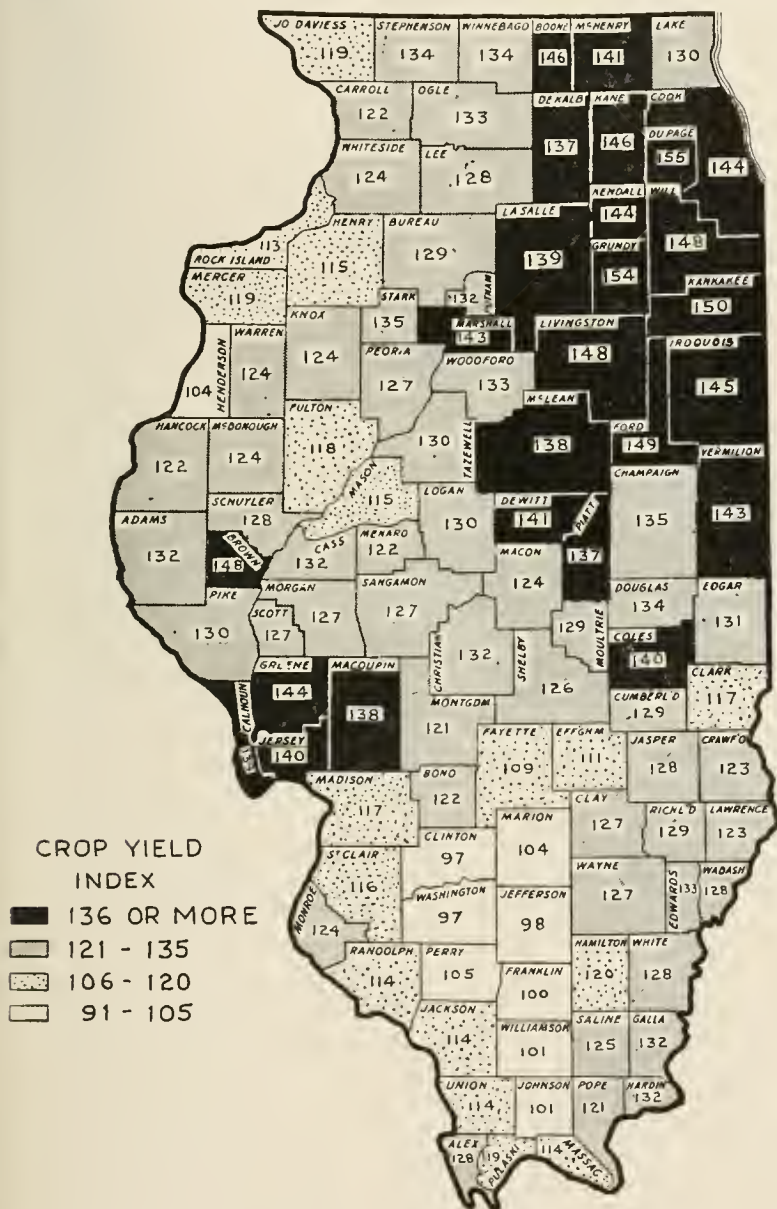


FIG. 3.—CROP YIELDS FOR 1941 COMPARED WITH 10-YEAR AVERAGE YIELDS (1931-1940) FOR THE SAME COUNTY. THE INDEXES ARE BASED ON COUNTY YIELDS OF CORN, OATS, WHEAT, AND SOYBEANS, (DATA FROM ILLINOIS COOPERATIVE CROP REPORTING SERVICE)

The 1941 yields of these four crops, as expressed in percentages of the 1931-1940 averages, follow: corn, 138; oats, 136; wheat, 108; and soybeans, 112. In 1941, corn yields were higher than the average of the 10 years in each of the counties of the state except Marion, Jackson, Johnson, Perry, Williamson, Franklin, and Jefferson; oat yields were higher in each of the counties except Rock Island, Henderson, and Union; wheat yields were below average in 27 counties; and soybean yields were below the average in 19 counties.

The counties with the highest crop yields were located, for the most part, in the east half of northern Illinois where weather conditions were particularly favorable for the small-grain crops as well as for the corn crop. Another group of counties north of St. Louis in Area 5 had exceptionally high yields. On the other hand, the counties with the lowest crop yields were located in the south-central area of the state.

Variations in net cash income an acre. The average net cash income an acre for Illinois accounting farms in 1941 varied from \$2.99 in Area 7 to \$13.28 in Area 4 (Table 4). Net cash incomes were higher in 1941 than in 1940 in all areas. The largest percentage increase for 1941 over 1940 was for Area 5, and the smallest percentage increase was for Area 6. Crop yields in both 1940 and 1941 were relatively better in Area 5 than in Area 6, and the price of hogs advanced more rapidly in 1941 than the prices of wheat and dairy products. Hogs are a more important source of income in Area 5 than in Area 6, whereas wheat and dairy products are of more importance in Area 6 than in Area 5.

TABLE 4.—NET CASH INCOME AN ACRE FOR ILLINOIS ACCOUNTING FARMS BY FARMING-TYPE AREAS FOR THE PERIODS 1925-1929 AND 1930-1934 AND FOR THE YEARS 1937, 1938, 1939, 1940, AND 1941

Farming-type areas	1925-1929	1930-1934	1937	1938	1939	1940	1941
Area 1, Chicago Dairy.....	\$9.59	\$5.25	\$7.76	\$4.97	\$4.04	\$8.66	\$9.05
Area 2, Northwestern Mixed Livestock*	7.94	4.92	7.30	6.16	5.76	8.71	12.01
Area 3, Western Livestock and Grain*	9.05	4.86	6.12	6.88	6.83	8.01	12.49
Area 4, East-Central Cash Grain*	8.91	4.46	6.26	6.69	7.08	9.02	13.28
Area 5, West-Central General Farming	6.35	3.23	4.72	4.64	4.55	4.68	8.30
Area 6, St. Louis Dairy and Wheat	3.26	2.03	3.29	2.84	3.69	4.34	4.82
Area 7, South-Central Mixed Farming	2.21	.91	1.28	1.41	1.39	1.81	2.99
Area 8, Wabash Valley Grain and Livestock	4.57	1.73	4.11	2.63	4.19	3.11	3.82
State Average (weighted by acres in each area) ..	\$7.13	\$3.74	\$5.33	\$5.25	\$5.40	\$6.82	\$9.91

*These areas include records from the Farm Bureau Farm Management Service for 1938, 1939, 1940, and 1941.

TABLE 5.—INVENTORY INCREASES BY FARMING-TYPE AREAS, 1941

Farming-type areas	Livestock	Feed and grain	Machinery	Improvements	Total
Area 1	\$ 845	\$ 962	\$402	\$204	\$2 413
Area 2	1 043	882	254	95	2 274
Area 3	1 338	1 023	286	51	2 698
Area 4	906	1 539	275	81	2 801
Area 5	930	940	296	75	2 241
Area 6	333	275	205	66	879
Area 7	325	353	126	61	865
Area 8	476	496	200	69	1 241
Weighted average	\$ 814	\$ 935	\$253	\$ 80	\$2 082

Inventory changes by farming-type areas. The average inventory increased \$2,082 a farm in 1941. This amount included inventory increases for all the areas and for all the items (Table 5). The inventory increases were largest for feed and grain but were almost as large for livestock, the two items combined accounting for 84 percent of the total inventory increase. The inventory increases for both grains and livestock were the result of increased supplies on hand and higher prices (Table 6).

Inventory increases were larger in 1941 than in 1940 for livestock, feed and grain, and machinery. The inventory increase per farm for machinery was 75 percent higher in 1941 than in 1935. The increase in inventory of \$253 a farm in 1941 for machinery and \$80 a farm for improvements indicates that farmers were still adding to their equipment, as they had been doing each year since 1935 when earnings reached a level which encouraged the purchase of new equipment.

Variations in net income an acre with inventory changes included. When inventory changes were included, the average net income an acre on Illinois accounting farms was 109 percent higher in 1941 than in 1940 (Table 7). This increase of 109 percent with inventories

TABLE 6.—BUSHEL OF CORN AND OATS IN INVENTORIES ON ACCOUNTING FARMS BY FARMING-TYPE AREAS, JANUARY 1, 1941 AND 1942

Farming-type areas	Corn		Oats	
	Jan. 1, 1941	Jan. 1, 1942	Jan. 1, 1941	Jan. 1, 1942
Area 1	1 808	2 373	959	965
Area 2	2 511	2 840	1 163	1 069
Area 3	3 658	3 894	829	839
Area 4	4 190	4 828	1 168	1 145
Area 5	2 205	2 624	501	534
Area 6	1 010	965	362	377
Area 7	933	1 029	191	270
Area 8	1 067	1 454	209	317
Weighted average	2 585	2 942	748	757

TABLE 7.—NET INCOME AN ACRE (INVENTORY BASIS) FOR ILLINOIS ACCOUNTING FARMS BY FARMING-TYPE AREAS FOR THE PERIODS 1925-1929 AND 1930-1934 AND FOR THE YEARS 1937, 1938, 1939, 1940, AND 1941

Farming-type areas	1925-1929	1930-1934	1937	1938	1939	1940	1941
Area 1, Chicago Dairy	\$11.04	\$ 2.64	\$ 8.69	\$ 8.12	\$ 9.23	\$13.50	\$22.35
Area 2, Northwestern Mixed Livestock*	15.11	2.70	8.46	8.34	11.45	12.34	23.02
Area 3, Western Livestock and Grain*	10.24	2.84	10.83	9.24	13.01	10.66	23.70
Area 4, East-Central Cash Grain*	10.30	2.76	10.30	8.66	13.42	9.99	23.85
Area 5, West-Central General Farming	7.69	1.99	8.21	6.78	8.79	8.08	17.26
Area 6, St. Louis Dairy and Wheat	5.41	.92	6.17	3.71	6.65	6.90	8.95
Area 7, South-Central Mixed Farming	3.34	.55	3.48	2.47	3.18	3.36	6.49
Area 8, Wabash Valley Grain and Livestock	5.34	1.20	6.12	3.31	5.04	5.22	9.44
State Average (weighted by acres in each area)	\$ 8.59	\$ 2.20	\$ 8.58	\$ 7.14	\$10.33	\$ 9.09	\$18.99

*For these areas, records from the Farm Bureau Farm Management Service are included for 1938-1941. The value of farm products used in the household was excluded.

included is in contrast with a 45-percent increase on the cash basis. The net income an acre for 1941 was \$9.08 larger on the inventory basis than on the cash basis; in other words, half of the net income for 1941 was an inventory increase. Incomes have been larger on the inventory basis than on the cash basis for all years since 1925, with the exceptions of 1930, 1931, and 1932.

Net incomes an acre, on the inventory basis, were higher in 1941 than in 1940 in all areas of the state. The range in net income per acre was from \$6.49 in Area 7 to \$23.85 in Area 4.

Income from agricultural conservation payments. Cash farm incomes of accounting farmers in 1941 included government payments

TABLE 8.—PERCENT OF ILLINOIS ACCOUNTING FARMERS RECEIVING AGRICULTURAL CONSERVATION PAYMENTS IN 1941 AND THE PAYMENTS PER FARM AND PER ACRE BY FARMING-TYPE AREAS

Area	Number of farms	Acres per farm	Percent of farms receiving payments	Payments per farm, all farms	Payments per farm, cooperating farms	Payments per acre, cooperating farms	Taxes per acre, all farms
Area 1	85	181	79	\$275	\$348	\$1.92	\$1.49
Area 2	516	208	80	391	486	2.34	1.35
Area 3	594	241	86	518	600	2.49	1.42
Area 4	991	265	88	576	658	2.48	1.54
Area 5	362	250	77	333	430	1.72	1.18
Area 6	307	213	63	131	209	.98	.85
Area 7	121	247	77	168	219	.89	.66
Area 8	80	221	72	184	254	1.15	.93
Area 9	34	232	68	137	203	.88	.69

which were received during the accounting year for participation in agricultural conservation programs. In a few cases, delayed payments for 1940, as well as payments for 1941, were included. Of the 991 farms in Area 4, 88 percent received payments (Table 8).

The percent of farms receiving payments in other areas ranged down to 63 in Area 6. The largest payments per farm and per acre were in the areas with the highest investments an acre, Areas 2, 3, and 4. In all the areas, the payments an acre far exceeded the taxes an acre.

Standards for Measuring Operating Efficiency

Farm account studies have repeatedly shown the principal factors affecting relative earnings to be land use, crop yields, amount of livestock, livestock efficiency, labor cost, machinery cost, and prices received for things sold. They have also shown the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the kinds and amounts of feed fed as well as the returns for feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of products produced affect the relative profitability of various types of farming for any particular year.

With the foregoing facts in mind, 2,175 farms in Areas 2, 3, 4, and 5 were sorted into groups as indicated in Figures 4, 5, and 6 and in Tables 9 and 10. Similar figures and tables for each of the nine major type-of-farming areas of the state can be found in the area reports for 1941. These reports are available upon request and may be used by any farmer who keeps records to analyze his efficiency.

The terms used in the various figures and tables are the same as those used in the *Illinois Farm Account Book*. For example, "improved land," a term that is used in Figure 4, means tillable land and land occupied by farmstead, roads, and orchards.

Crop yields. Figure 4 shows the effect of quality of land (expressed as value an acre) on yields of corn, oats, wheat, and soybeans. Land valued at \$40 an acre produced about 52 bushels of corn, 37 bushels of oats, 19 bushels of wheat, and 15 bushels of soybeans; land valued at \$140 an acre produced about 73 bushels of corn, 48 bushels of oats, 24 bushels of wheat, and 28 bushels of soybeans. The differences in acre-yields between \$40 land and \$140 land are as follows: corn, 21 bushels; oats, 11 bushels; wheat, 5 bushels; and soybeans, 13 bushels.

Such variations are significant, but the fact should be kept in mind that they apply only to the conditions which prevailed in 1941. Wheat

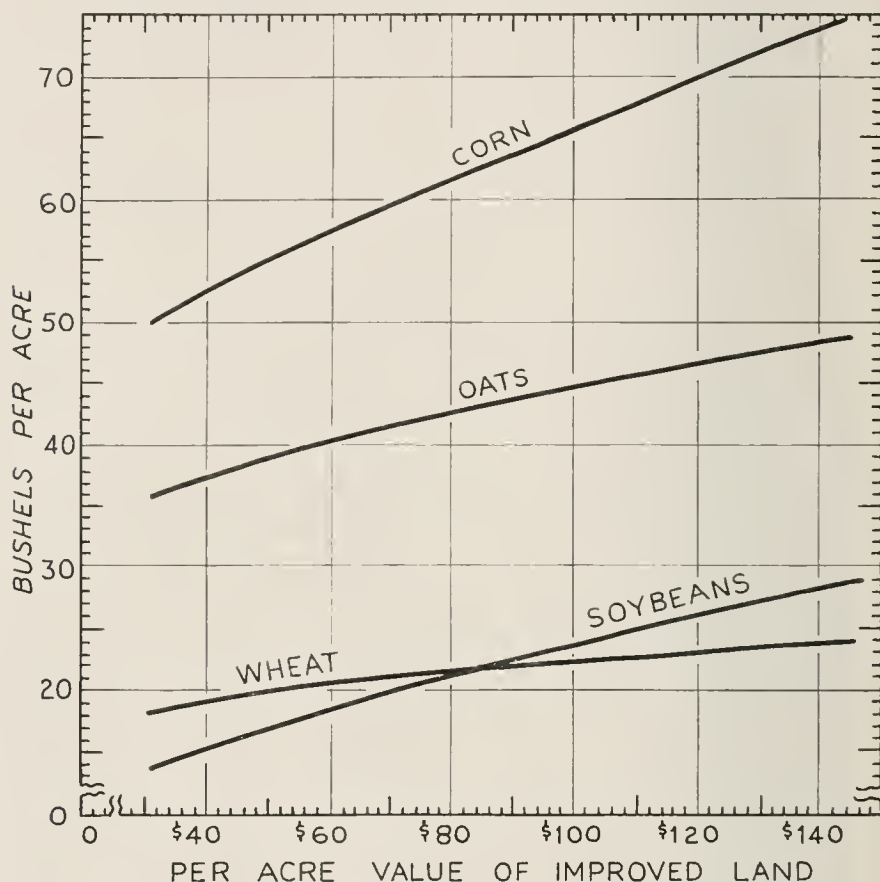


FIG. 4.—AVERAGE YIELDS OF CORN, OATS, WHEAT, AND SOYBEANS WITH VARYING VALUES OF IMPROVED LAND, FARMING-TYPE AREAS, 3, 4, AND 5, 1941

yields may be higher or lower in relation to corn yields in years with growing conditions different than those in 1941. Data of this type are valuable because they enable farmers to compare the yields on their own farms with those on farms having a similar quality of land.

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

TABLE 9.—SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS FOR 2,175 ACCOUNTING FARMS IN FARMING-TYPE AREAS 2, 3, 4, AND 5, 1941

Item	Source of income					
	Grain 40% +	Dairy sales 40% +	Hogs 40% +	Cattle 40% +	General farm	
					L.S. 60% +	L.S. 60% -
Number of farms	659	78	692	154	406	186
Percent of income from prod. l.s. .	33.6	82.4	85.7	92.6	72.4	54.3
Percent of income from crops . . .	57.6	9.2	5.5	1.4	18.1	34.1
Investments						
Total per farm	\$40 393	\$24 776	\$32 744	\$57 308	\$34 485	\$31 816
Total per acre	150	134	148	163	146	144
Land per acre	104	73	90	93	88	94
Improvements per acre	16	25	21	21	21	18
Machinery per acre ^a	9	10	10	9	10	10
Earnings						
Per farm						
Gross earnings	\$ 9 029	\$ 6 197	\$ 8 216	\$13 873	\$ 8 343	\$ 7 328
Gross expenses ^b	3 083	2 969	2 923	5 372	3 112	2 725
Net earnings	\$ 5 946	\$ 3 228	\$ 5 293	\$ 8 501	\$ 5 231	\$ 4 603
Per acre						
Gross earnings	\$ 33.54	\$ 33.11	\$ 37.21	\$ 39.11	\$ 35.43	\$ 33.25
Gross expenses ^b	11.46	15.84	13.24	15.21	13.20	12.39
Net earnings	\$ 22.08	\$ 17.27	\$ 23.97	\$ 23.90	\$ 22.23	\$ 20.86
Rate earned on investment (percent)	14.8	13.1	16.3	14.8	15.3	14.5
Labor and management earnings	\$ 4 527	\$ 2 610	\$ 4 261	\$ 6 203	\$ 4 113	\$ 3 606
Size and Intensity						
Acres per farm	269	188	222	362	237	220
Percent of land area tillable . . .	88.9	78.8	81.5	81.7	82.8	86.8
Percent of tillable land in grain .	71.4	53.8	63.1	61.4	61.8	64.5
Percent in hay and pasture . . .	23.7	42.6	34.0	33.9	34.5	31.0
Feed fed per acre to prod. l.s. . .	\$ 6.42	\$ 13.53	\$ 18.11	\$ 24.64	\$ 14.34	\$ 10.13
Months of labor per 100 crop A. .	10.4	22.7	15.5	13.3	15.6	13.5
Total months of labor	20.8	24.5	21.4	30.0	23.6	20.3
Crop Yields per Acre						
Corn, bushels	67.0	61.1	66.6	72.0	65.8	64.4
Livestock Returns						
Per \$100 feed fed	\$188	\$210	\$182	\$150	\$186	\$189
Hog returns per litter	138	148	152	157	143	145
Dairy returns per cow	98	169	97	104	125	109
Expense Factors						
Labor cost per crop acre ^b	\$ 5.73	\$ 12.12	\$ 8.60	\$ 7.71	\$ 8.63	\$ 7.30
Horse and machinery cost per crop acre	5.10	8.70	6.54	6.66	6.27	5.79
Improvement cost per acre	1.14	1.70	1.48	1.52	1.44	1.28
Land tax per acre	1.30	1.06	1.20	1.23	1.17	1.24

^aMachinery includes farm share of automobile.^bExpenses include operator's and family's labor.

Each farmer, however, should use caution in interpreting the data in Table 9. For example, the fact that hog farms showed the largest rate earned on the investment for 1941 and that dairy farms showed the smallest does not mean such a relationship will prevail over a long period of years. The relative profitability of these enterprises in 1941 was influenced by conditions affecting price and production.

In 1940, the rate earned on investment was largest for cattle farms and smallest for hog farms, as indicated by the following: grain farms, 7.6 percent; dairy farms, 6.8 percent; hog farms, 6.4 percent; cattle farms, 8.2 percent; general farms with more than 60 percent of the income from livestock, 7.1 percent; general farms with less than 60 percent of the income from livestock, 7.0 percent. The change in the relative earnings of hog farms from 1940 to 1941 clearly reflects the increase in the average price of hogs from \$5.54 to \$9.37.

The following data indicate the average rate earned on investment for the 10-year period, 1926-1935, for farms from the same area grouped according to source of income: farms with over 60 percent of their incomes from grain, 4.0 percent; farms with 40-59 percent of their incomes from grain, 3.6 percent; hog farms, 2.8 percent; cattle farms, 3.5 percent; dairy farms, 2.8 percent; and mixed-income farms, 3.1 percent. On the basis of earnings on accounting farms for the past 15 years, the grain farms in Areas 2, 3, 4, and 5 have shown higher current returns than have livestock farms. In these records, no charge was made for fertility losses, and no inference is intended concerning the results if these systems are followed for another 15-year period. The mechanization of farms in this area in recent years has reduced the cost of producing grains more than the cost of producing livestock and livestock products.

When comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that the necessary returns per \$100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs vary widely. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, when comparing crop yields for the various types of farming, one should note the following items which indicate that the grain farms were located on the better land: (1) high value of land per acre; (2) larger percent of land area tillable; (3) large percent of land in grain; and (4) high land tax per acre.

Differences in expenses are highly significant for the 6 groups of farms. Labor input per 100 crop acres was highest on the dairy farms, where 22.7 months of labor were used, and lowest on the grain farms, where 10.4 months of labor were used. The dairy farmers evidently utilized a large amount of labor to increase the size of their businesses without increasing the size of their farms.

The labor cost per crop acre ranged from \$12.12 on the dairy farms to \$5.73 on the grain farms; the horse and machinery cost per crop acre

TABLE 10.—SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS FOR 2,175 ACCOUNTING FARMS IN FARMING-TYPE AREAS 2, 3, 4, AND 5, 1941

Item	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms	247	785	541	316	139	147
Acres per farm	102	166	241	321	399	571
Investments						
Total per farm	\$16 099	\$26 257	\$36 197	\$47 923	\$55 917	\$76 663
Total per acre	158	158	150	150	140	135
Land per acre	93	98	97	98	92	87
Improvements per acre	25	21	19	18	16	16
Machinery per acre ^a	12	11	10	9	8	8
Earnings						
Per farm						
Gross earnings	\$ 4 117	\$ 6 333	\$ 8 536	\$11 050	\$13 064	\$17 183
Gross expenses ^b	1 759	2 382	3 064	3 804	4 350	5 857
Net earnings	\$ 2 358	\$ 3 951	\$ 5 472	\$ 7 246	\$ 8 714	\$11 326
Per acre						
Gross earnings	\$ 40.32	\$ 38.09	\$ 35.36	\$ 34.43	\$ 32.74	\$ 30.14
Gross expenses ^b	17.21	14.33	12.69	11.86	10.90	10.28
Net earnings	\$ 23.11	\$ 23.76	\$ 22.67	\$ 22.57	\$ 21.84	\$ 19.86
Rate earned on investment (percent)	14.8	15.1	15.2	15.2	15.7	14.8
Labor and management earnings	\$ 2 143	\$ 3 240	\$ 4 268	\$ 5 452	\$ 6 511	\$ 8 075
Size and Intensity						
Percent of land area tillable	87.8	87.6	85.6	84.1	81.9	80.4
Percent of tillable land in grain	62.6	65.5	66.6	67.0	64.9	64.6
Percent in hay and pasture	34.3	31.3	29.6	28.7	30.9	29.2
Feed fed per acre to prod. l.s.	\$ 15.42	\$ 13.86	\$ 12.13	\$ 12.22	\$ 11.46	\$ 11.88
Percent of income from prod. l.s.	71.1	65.7	60.4	60.5	60.9	63.2
Percent of income from grain	17.9	24.3	30.3	30.8	30.5	28.7
Months of labor per 100 crop A.	20.9	15.8	13.5	12.0	11.7	10.1
Total months of labor	14.7	18.1	22.1	26.2	29.5	35.9
Number of work horses	2.2	2.5	2.9	3.2	3.7	4.3
Crop Yields per Acre						
Corn (bushels)	66.3	66.7	67.2	67.2	65.4	65.3
Livestock Returns						
Per \$100 feed fed	\$198	\$193	\$185	\$179	\$179	\$162
Hog returns per litter	146	150	147	147	148	149
Dairy returns per cow	108	114	115	112	113	112
Expense Factors						
Labor cost per crop acre ^b	\$ 11.46	\$ 8.64	\$ 7.47	\$ 6.86	\$ 6.41	\$ 5.80
Horse and machinery cost per crop acre ^a	7.38	6.40	5.90	5.66	5.66	5.52
Improvement cost per acre	1.68	1.51	1.34	1.26	1.20	1.15
Land tax per acre	1.31	1.29	1.23	1.21	1.20	1.16

^aMachinery includes farm share of automobile.^bExpenses include operator's and family's labor.

was highest on the dairy farms, where it averaged \$8.70, and lowest on the grain farms, where it averaged \$5.10; the improvement cost per acre averaged \$1.70 on the dairy farms and \$1.14 on the grain farms.

Labor, horse and machinery, and improvement costs were higher for all sources of income groups in 1941 than in 1940; labor cost per crop acre, for example, was 17 percent higher on the grain farms in 1941 than in 1940.

Size of farm. When the farm records in Farming-Type Areas 2, 3, 4, and 5 are sorted according to the total acres in the farm, they indicate that the operators on the largest farms took in more money during the year than did those on the smallest ones; and after deductions were made for farm business expenditures and interest on the investment, the 147 largest farms had labor and management earnings which averaged \$8,075, contrasted with \$2,143 for the 247 smallest farms. The latter had higher investments an acre for improvements, machinery, and total investment, indicating a higher capital input. The rate earned on investment was practically the same for all size groups, but there was a slight increase from the smallest farms up to the size ranging from 361 to 440 acres. The difference was much smaller in 1941 than in 1940 or for a recent 10-year period. The average rates for 1940 were as follows: less than 121 acres, 5.8 percent; 121 to 200 acres, 7.2 percent; 201 to 280 acres, 7.4 percent; 281 to 360 acres, 7.3 percent; 361 to 440 acres, 7.0 percent; 441 or more acres, 7.9 percent.

A part of the difference in the earnings pattern as related to size of farm for 1941 contrasted with that of 1940 may be due to the correlation of enterprises with size of farm. The size of the hog farms averaged much smaller than that of the cattle farms, and hog prices were much higher in relation to cattle prices in 1941 than in 1940. This would cause the earnings on small farms in 1941 to be higher in relation to large farms than in 1940.

For the 10-year period, 1926-1935, the average rate earned on investment (value of farm products used in the household excluded) for accounting farms by size groups in Areas 3, 4, and 5 was as follows: 0-99 acres, .8 percent; 100-139 acres, 2.0 percent; 140-179 acres, 2.6 percent; 180-219 acres, 2.8 percent; 220-259 acres, 3.0 percent; 260-299 acres, 3.5 percent; 300-339 acres, 3.4 percent; and 340 acres and over, 3.3 percent. In recent years, the rate earned on investment increased as the size of farm increased to about 300 acres, declined slightly for farms ranging from 300 to 400 acres, and increased again for farms ranging from 400 to 600 acres. Those farms that are too large for one tractor but not large enough for two seem to be an awkward size.

The smallest farms were operated more intensively than were the largest ones. This variation was indicated by the higher gross earnings an acre, by the larger labor and capital input an acre, and by the larger value of feed fed an acre to productive livestock.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their businesses by improving the quality and increasing the

amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. The effect of the amount of feed fed an acre to productive livestock on labor and horse and machinery cost per crop acre is shown graphically in Figures 5 and 6 for the same size groups of farms as were used in Table 10.

Four significant things are apparent in these charts: (1) The costs per crop acre increased as the size of the farms decreased; (2) the costs increased as the amount of feed fed per acre increased; (3) the costs decreased much more rapidly when the size of farms increased from 120 acres or less to 121-200 acres than when they increased from 201-280 to 281-360 acres, or into the larger size groups (this situation is explained in part by the fact that dairy cattle and poultry predominate

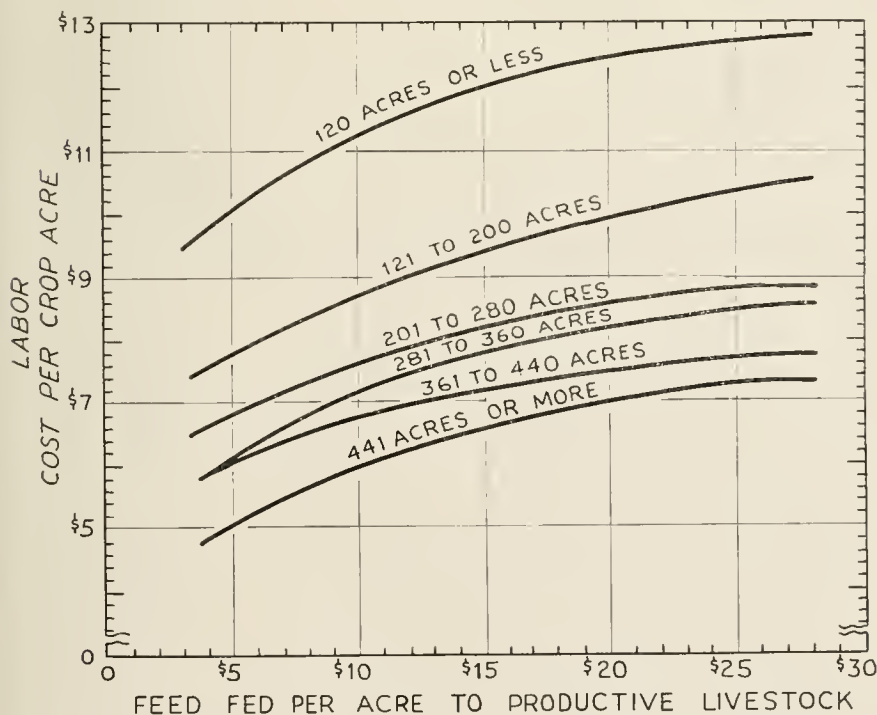


FIG. 5.—LABOR COST PER CROP ACRE FOR FARMS OF VARYING SIZE AND WITH VARYING AMOUNTS OF FEED FED TO PRODUCTIVE LIVESTOCK, FARMING-TYPE AREAS 2, 3, 4, AND 5, 1941

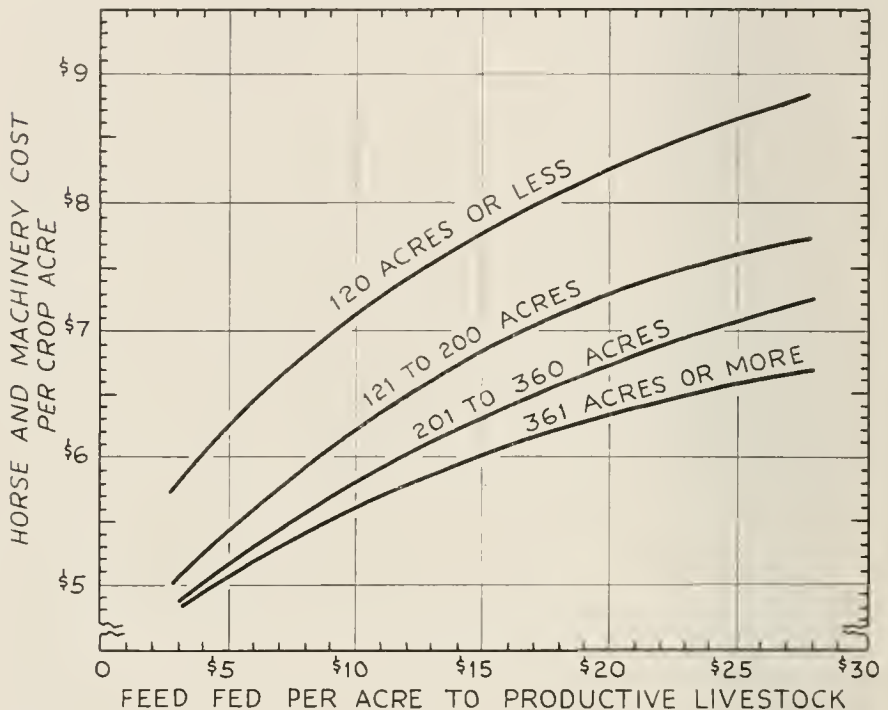


FIG. 6.—HORSE AND MACHINERY COST PER CROP ACRE FOR FARMS OF VARYING SIZE AND WITH VARYING AMOUNTS OF FEED FED TO PRODUCTIVE LIVESTOCK, FARMING-TYPE AREAS 2, 3, 4, AND 5, 1941

on the smaller farms and that beef cattle predominate on the larger farms); and (4) the costs increased rapidly as the feed fed an acre increased from \$3 to about \$10 an acre, especially for farms in the smallest size group, and the costs increased less but more uniformly as larger amounts of feed were fed.

Farmers who know what their cost for labor and for horse and machinery expense per crop acre was in 1941 will find that these data contain a basis for comparing their expenses with averages for other farms of the same size and with the same intensity of livestock.¹

Variations by Farming-Type Areas

The data in Tables 11 and 12 indicate a wide range of farming conditions in Illinois and afford ample evidence of the need for grouping counties by farming-type areas. They show a range in size from 181 acres

¹Data for other areas of Illinois are available in the area reports for 1941.

in Area 1 to 265 acres in Area 4 and an average investment per farm varying from \$12,384 in Area 9 to \$44,867 in Area 4.

Crop yields varied from area to area with the productivity of the soil and with the weather conditions. The relative proportion of income from grain, hogs, cattle, dairy, and poultry varied according to feeds available, markets, labor, and other factors. Expenses per crop acre for labor and for horses and machinery varied with the size of farm, the amount and kind of livestock, the wages for labor, and the type of equipment.

Data for Counties and Groups of Counties

Averages were calculated for each county with 30 or more records and for groups of counties with less than 30 records. These averages are arranged in Table 13 according to farming-type areas. The averages for Area 1 are given at the front of the list, and those for Area 9 at the end of it.

TABLE 11.—INVESTMENTS, CASH RECEIPTS, CASH EXPENSES, AND INVENTORY CHANGES BY FARMING-TYPE AREAS, 1941

Item	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Area 9
Capital Investment, Total	\$30 621	\$33 724	\$37 630	\$44 867	\$28 037	\$18 363	\$14 129	\$15 325	\$12 384
Land	14 073	18 461	23 338	30 496	16 944	9 811	7 433	8 951	6 049
Farm improvements	6 897	5 930	4 338	4 959	3 688	2 830	2 251	2 039	2 299
Machinery and equipment	2 341	2 312	2 374	2 683	2 016	1 861	1 470	1 372	1 358
Feed and grain	2 454	2 583	3 108	3 720	2 349	1 742	1 124	1 333	1 068
Livestock, total	4 856	4 429	3 907	3 009	3 040	2 119	1 851	1 630	1 610
Cash Receipts, Total	\$ 9 135	\$ 9 310	\$10 151	\$ 9 993	\$ 8 376	\$ 4 847	\$ 3 952	\$ 4 336	\$ 3 453
Feed and grain	666	901	1 853	3 633	1 766	987	763	1 105	734
AAA payments	275	391	518	576	333	131	168	184	137
Labor and miscellaneous	318	326	422	443	397	292	263	278	272
Livestock, total	7 876	7 692	7 358	5 341	5 880	3 437	2 758	2 679	2 310
Horses	41	25	32	41	40	48	64	33	75
Cattle	2 969	3 493	2 806	2 164	2 225	773	729	776	623
Hogs	1 120	2 377	3 485	1 900	2 448	886	1 095	1 164	747
Sheep	99	216	266	226	100	68	124	87	44
Poultry and eggs	362	379	294	394	288	429	376	374	262
Dairy sales	3 285	1 202	475	616	689	1 233	370	245	559
Cash Expenses, Total	\$ 6 707	\$ 5 980	\$ 6 379	\$ 5 710	\$ 5 448	\$ 3 017	\$ 2 536	\$ 2 844	\$ 2 463
Farm improvements	626	476	417	431	367	273	258	272	258
Livestock purchases	2 128	2 128	1 822	1 437	1 577	437	350	521	352
Feed and grain	935	1 117	1 495	951	1 174	616	487	489	417
Machinery and equipment	1 556	1 281	1 502	1 646	1 367	1 046	846	941	754
Hired labor	706	417	515	535	421	275	239	237	313
Crop expense	203	163	159	184	142	118	143	139	156
Taxes	270	281	343	408	296	181	164	205	159
Livestock and miscellaneous	137	117	126	118	104	71	49	40	54
Cash Balance	\$ 2 428	\$ 3 330	\$ 3 772	\$ 4 283	\$ 2 928	\$ 1 830	\$ 1 416	\$ 1 492	\$ 990
Increase in inventory	2 413	2 274	2 698	2 801	2 241	879	865	1 241	583
Total unpaid labor	787	810	764	768	850	804	678	646	663
Net Farm Income	\$ 4 054	\$ 4 794	\$ 5 706	\$ 6 316	\$ 4 319	\$ 1 905	\$ 1 603	\$ 2 087	\$ 910

TABLE 12.—FACTORS HELPING TO ANALYZE THE FARM BUSINESS AVERAGES FOR FARMING-TYPE AREAS, 1941

Item	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Area 9
Size of farm, acres	181	208	241	265	250	213	247	221	232
Tillable land (percent)	82	82	81	90	80	80	82	84	76
Inventory Basis									
Gross receipts per acre	\$41.25	\$37.41	\$36.79	\$36.55	\$28.65	\$19.65	\$14.56	\$18.44	\$13.11
Total expense per acre	18.90	14.09	13.09	12.70	11.39	10.70	8.07	9.00	9.18
Net receipts per acre	\$22.35	\$23.02	\$23.70	\$23.85	\$17.26	\$8.95	\$6.49	\$9.44	\$3.93
Cash Basis									
Gross receipts per acre	\$50.36	\$44.71	\$42.15	\$37.74	\$33.46	\$22.76	\$16.01	\$19.61	\$14.91
Total cash expense per acre	41.31	32.61	29.66	24.46	25.16	17.94	13.02	15.79	13.50
Net cash income per acre	\$ 9.05	\$12.10	\$12.49	\$13.28	\$ 8.30	\$ 4.82	\$ 2.99	\$ 3.82	\$ 1.41
Acres in:									
Corn	49	54	67	77	51	29	39	42	27
Oats	28	36	35	40	21	16	12	13	8
Wheat	2	2	6	15	25	38	20	29	21
Soybeans	5	6	16	35	23	6	8	9	5
Bushels per acre:									
Corn	71	71	68	68	64	43	39	48	34
Oats	57	50	41	50	43	36	32	41	30
Wheat	26	20	20	23	22	21	20	24	22
Soybeans	18	23	25	26	22	10	11	17	14
Value of feed fed to livestock	\$3 728	\$3 893	\$3 884	\$2 781	\$2 911	\$1 828	\$1 547	\$1 486	\$1 209
Returns per \$100 feed fed	179	175	183	181	188	196	192	192	204
Feed fed per acre to livestock	\$20.55	\$18.70	\$16.13	\$10.50	\$11.63	\$ 8.58	\$ 6.27	\$ 6.72	\$ 5.22
Returns per acre from livestock	36.78	32.80	29.60	19.05	21.85	16.78	12.00	12.94	10.65
Horse and machinery cost per crop acre	\$ 8.46	\$ 6.58	\$ 6.39	\$ 5.67	\$ 5.96	\$ 6.07	\$ 4.09	\$ 5.02	\$ 6.47
Labor cost per crop acre	11.59	8.83	7.98	6.50	8.35	8.24	6.60	6.72	9.03
Value of land per acre	\$	\$	\$	\$	\$	\$	\$	\$	\$
Value of improvements per acre	78	89	97	115	68	46	30	40	26
Total investment per acre	38	29	20	19	15	13	9	9	10
Number of farms included	169	162	156	169	112	86	57	69	53
	85	516	594	991	362	307	121	80	34

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941

Accounting items	McHenry	Boone, Cook, DuPage, Kane, Lake	DeKalb	Stephen- son	Lee
Capital investment, total..... 1	\$26 910	\$32 752	\$44 004	\$23 423	\$47 849
Land..... 2	11 017	15 828	25 431	11 058	29 968
Farm improvements..... 3	7 060	6 804	7 081	5 140	6 433
Horses..... 4	327	342	301	248	243
Cattle..... 5	3 691	4 008	4 080	2 352	3 348
Hogs..... 6	216	556	877	628	792
Sheep..... 7	10	109	306	25	290
Poultry..... 8	115	125	109	121	101
Feed and grain..... 9	2 245	2 575	3 196	1 876	3 822
Machinery and equipment..... 10	2 229	2 405	2 623	1 975	2 852
Receipts, net increases, total..... 11	\$ 7 462	\$ 7 934	\$ 9 791	\$ 6 378	\$10 168
Cattle..... 12	890	1 849	3 095	1 244	2 637
Dairy sales..... 13	4 699	2 472	947	1 874	857
Hogs..... 14	618	1 656	3 057	2 418	3 037
Sheep..... 15	11	85	142	32	214
Poultry and eggs..... 16	320	356	398	354	338
Farm products used in household..... 17	293	271	259	283	284
Feed and grain..... 18	298	920	1 338	13	2 111
AAA payment..... 19	287	267	509	124	623
Labor and miscellaneous..... 20	46	58	46	36	67
Expenses, net decreases, total..... 21	\$ 2 659	\$ 2 633	\$ 2 519	\$ 1 645	\$ 2 719
Farm improvements..... 22	397	427	415	287	442
Feed and grain..... 23	824	937	883	591	940
Machinery and equipment..... 24	827	636	518	329	587
Hired labor..... 25	197	207	226	119	219
Crop expenses..... 26	239	288	325	199	366
Taxes..... 27	175	138	152	120	165
Livestock and miscellaneous..... 28	803	5 301	7 272	4 733	7 449
Receipts less expenses..... 29	778	792	784	850	742
Unpaid labor..... 30	4 025	4 509	6 488	3 883	6 707
Net farm earnings..... 31	15.0	13.8	14.7	16.6	14.0
Rate earned on investment, percent..... 32	\$ 3 269	\$ 3 474	\$ 4 917	\$ 3 346	\$ 4 924
Labor and management earnings..... 33	2 461	2 409	3 865	2 758	4 374
Excess of sales over expenses..... 34	2 049	2 621	3 148	1 692	2 791
Increase in inventory..... 35	31	54	142	86	53
Number of farms included..... 36	172	187	213	160	270
Size of farm, acres..... 37	\$ 43.31	\$ 42.52	\$ 45.95	\$ 39.79	\$ 37.60
Gross earnings per acre..... 38	19.95	18.36	15.50	15.57	12.80
Total expenses per acre..... 39	\$ 23.36	\$ 24.16	\$ 30.45	\$ 24.22	\$ 24.80
Net earnings per acre..... 40	\$ 64	\$ 85	\$119	\$ 69	\$111
Value of land per acre..... 41	68	88	122	70	114
Value of improved land per acre..... 42	41	36	33	32	24
Value of improvements per acre..... 43	156	176	206	146	177
Total investment per acre..... 44	79.1	84.2	91.1	83.5	86.9
Percent of land area tillable..... 45	30.4	34.2	35.2	26.4	34.2
Percent of tillable land in—	14.8	20.8	22.3	21.2	22.0
Corn..... 46	9	1.2	1.1	.4	1.4
Oats..... 47	1.0	4.8	5.0	1.3	6.4
Wheat..... 48	8.1	8.1	7.0	5.0	6.6
Soybeans for grain..... 49	25.9	19.1	18.7	31.1	20.5
Other cultivated crops..... 50	18.9	11.8	10.7	14.6	8.9
Legume hay and pasture..... 51	67.4	72.0	75.8	72.4	66.4
Nonlegume hay and pasture..... 52	51.6	58.5	59.8	43.0	52.4
Bushels per acre: Corn..... 53	20.0	27.2	25.2	14.0	19.4
Oats..... 54	39.8	41.5	43.2	37.2	29.2
Wheat..... 55	19.3	18.3	23.0	18.8	23.5
Barley..... 56	\$ 18.53	\$ 21.63	\$ 22.61	\$ 19.79	\$ 16.15
Soybeans..... 57	212	164	163	193	167
Feed fed per acre to livestock..... 58	3.20	3.60	3.87	3.21	3.54
Returns for \$100 feed fed..... 59	6.8	11.0	21.7	17.6	19.4
Poultry returns per hen..... 60	\$150	\$170	\$165	\$151	\$165
Number of litters farrowed..... 61	177	169	137	129	125
Returns per litter..... 62	\$ 9.39	\$ 8.04	\$ 6.32	\$ 7.08	\$ 5.55
Dairy returns per cow..... 63	14.51	10.26	7.80	11.57	6.64
Horse and machinery cost per crop acre..... 64	2.30	2.29	1.95	1.79	1.63
Labor cost per crop acre..... 65	1.39	1.54	1.53	1.24	1.35
Improvement cost per acre..... 66					
Taxes per acre..... 67					

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—Continued

	Ogle	Rock Island	Winne- bago	White- side	Jo Davieess	Carroll	Henry	McDon- ough	Knox
1	\$30 648	\$25 159	\$31 968	\$29 293	\$25 788	\$26 372	\$38 311	\$35 375	\$40 145
2	16 289	13 820	14 617	14 675	12 826	13 768	22 271	22 585	24 629
3	5 696	4 189	7 722	5 626	4 931	4 888	5 796	4 292	5 436
4	289	256	344	267	371	320	249	246	255
5	2 929	1 740	3 044	3 312	2 756	2 758	3 180	1 669	2 328
6	785	677	844	911	760	708	1 095	1 009	1 063
7	53	80	163	68	99	132	70	67	126
8	83	115	101	98	91	132	99	82	69
9	2 336	2 190	2 550	2 233	1 956	1 869	2 957	3 044	3 758
10	2 188	2 092	2 583	2 103	1 998	1 797	2 594	2 381	2 481
11	\$ 7 103	\$ 6 398	\$ 8 416	\$ 7 631	\$ 6 826	\$ 6 731	\$ 8 987	\$ 8 977	\$ 9 709
12	1 962	1 117	1 876	2 223	1 440	2 366	2 647	1 680	1 612
13	1 080	693	1 972	1 264	1 660	623	473	347	657
14	2 632	2 874	2 554	3 071	2 719	2 501	4 376	4 555	3 866
15	67	76	156	50	82	146	123	69	94
16	375	405	356	338	323	413	382	303	223
17	258	310	277	249	299	289	289	310	312
18	291	529	765	.....	.....	.....	160	1 242	2 342
19	400	350	391	400	266	381	485	429	531
20	38	44	69	36	37	12	52	42	72
21	\$ 2 139	\$ 1 637	\$ 2 458	\$ 2 117	\$ 2 191	\$ 1 718	\$ 2 480	\$ 2 248	\$ 2 566
22	411	260	541	346	369	260	364	342	398
23	.....	.....	.....	159	308	207	.....	.....	.....
24	714	640	861	735	661	536	876	828	880
25	452	216	470	359	365	262	574	467	552
26	127	105	191	133	117	109	162	140	196
27	304	301	271	246	234	216	351	310	378
28	131	115	124	139	137	128	153	161	162
29	\$ 4 964	\$ 4 761	\$ 5 958	\$ 5 514	\$ 4 635	\$ 5 013	\$ 6 507	\$ 6 729	\$ 7 143
30	845	793	855	827	832	819	793	778	777
31	\$ 4 119	\$ 3 968	\$ 5 103	\$ 4 687	\$ 3 803	\$ 4 194	\$ 5 714	\$ 5 951	\$ 6 366
32	13.4	15.8	16.0	16.0	14.7	15.9	14.9	16.8	15.9
33	\$ 3 199	\$ 3 317	\$ 4 123	\$ 3 821	\$ 3 097	\$ 3 451	\$ 4 400	\$ 4 779	\$ 4 975
34	2 848	3 166	3 062	2 971	3 327	2 410	3 557	4 223	4 103
35	1 858	1 285	2 619	2 294	1 009	2 314	2 661	2 196	2 728
36	44	49	34	37	38	33	81	74	62
37	211	184	248	198	234	185	227	225	268
38	\$ 33.73	\$ 34.83	\$ 33.91	\$ 38.62	\$ 29.12	\$ 36.34	\$ 39.66	\$ 39.97	\$ 36.17
39	14.17	13.23	13.35	14.90	12.90	13.69	14.44	13.47	12.45
40	\$ 19.56	\$ 21.60	\$ 20.56	\$ 23.72	\$ 16.22	\$ 22.65	\$ 25.22	\$ 26.50	\$ 23.72
41	\$ 77	\$ 75	\$ 59	\$ 74	\$ 55	\$ 74	\$ 98	\$101	\$ 92
42	86	84	64	77	65	83	106	110	106
43	27	23	31	28	21	26	26	19	20
44	146	137	129	148	110	142	169	158	150
45	77.6	76.6	75.3	83.1	62.6	77.9	81.6	83.9	76.8
46	29.9	34.3	29.4	31.9	24.7	28.4	35.1	33.2	34.9
47	23.7	16.2	18.9	18.8	18.5	21.6	19.9	15.3	16.9
48	.7	1.1	1.0	5.1	.5	.6	1.4	7.6	1.9
49	2.3	2.5	3.2	1.9	.3	.6	3.4	13.2	11.8
50	6.2	4.2	8.2	3.2	6.3	4.2	2.6	3.7	4.0
51	25.2	29.7	27.2	22.9	26.9	30.1	24.2	17.2	18.8
52	12.0	12.0	12.1	16.2	22.8	14.5	13.4	9.8	11.7
53	68.9	63.4	70.0	73.5	65.0	74.2	68.1	64.4	67.7
54	47.1	32.1	44.0	40.7	41.1	42.6	36.8	44.0	34.1
55	20.0	16.3	23.3	19.5	20.0	16.7	15.8	22.6	14.6
56	31.7	28.0	35.6	34.0	21.9	24.4	26.3	.....	.....
57	21.6	22.9	24.4	19.1	18.0	23.8	24.0	24.5	27.0
58	\$ 17.90	\$ 14.75	\$ 15.45	\$ 21.31	\$ 13.80	\$ 18.44	\$ 20.34	\$ 17.40	\$ 12.55
59	167	199	186	170	199	183	179	184	199
60	4.22	3.72	4.14	3.39	3.22	3.04	3.88	4.22	3.45
61	17.0	19.8	16.9	24.6	18.1	18.5	29.2	31.7	26.6
62	\$165	\$147	\$161	\$146	\$146	\$154	\$151	\$147	\$149
63	127	99	135	136	114	111	96	100	110
64	\$ 6.46	\$ 7.57	\$ 6.74	\$ 7.05	\$ 7.94	\$ 6.41	\$ 7.17	\$ 6.17	\$ 5.96
65	9.61	9.55	8.50	9.41	11.17	10.11	9.44	7.82	7.48
66	1.95	1.42	2.18	1.75	1.57	1.40	1.61	1.52	1.48
67	1.44	1.64	1.09	1.24	1.00	1.17	1.55	1.38	1.41

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—*Continued*

Accounting items	Bureau	Marshall-Putnam	Peoria	Fulton	Hancock
Capital investment, total..... 1	\$40 593	\$49 823	\$35 323	\$30 055	\$29 561
Land..... 2	24 394	31 906	22 868	19 077	19 008
Farm improvements..... 3	6 024	6 113	4 505	3 746	3 300
Horses..... 4	235	211	262	223	309
Cattle..... 5	2 686	3 413	1 630	1 760	2 129
Hogs..... 6	1 042	1 104	763	840	742
Sheep..... 7	190	514	131	83	73
Poultry..... 8	127	89	106	63	55
Feed and grain..... 9	3 313	3 972	2 785	2 232	2 251
Machinery and equipment..... 10	2 582	2 501	2 273	2 031	1 694
Receipts, net increases, total..... 11	\$ 9 774	\$11 571	\$ 8 498	\$ 8 023	\$ 7 229
Cattle..... 12	2 275	2 840	1 168	1 323	1 476
Dairy sales..... 13	621	557	467	474	522
Hogs..... 14	4 051	4 943	3 347	3 706	2 994
Sheep..... 15	123	379	56	86	90
Poultry and eggs..... 16	477	229	359	251	177
Farm products used in household..... 17	326	284	281	277	277
Feed and grain..... 18	1 392	1 557	2 145	1 555	1 253
AAA payment..... 19	452	724	572	583	372
Labor and miscellaneous..... 20	57	58	103	68	68
Expenses, net decreases, total..... 21	\$ 2 334	\$ 2 907	\$ 2 111	\$ 2 250	\$ 1 936
Farm improvements..... 22	399	460	306	355	292
Feed and grain..... 23	.....	.....	.....	.....	.....
Machinery and equipment..... 24	819	1 072	723	813	668
Hired labor..... 25	526	594	463	432	424
Crop expenses..... 26	159	195	139	136	150
Taxes..... 27	278	417	325	391	297
Livestock and miscellaneous..... 28	153	169	155	123	105
Receipts less expenses..... 29	\$ 7 440	\$ 8 664	\$ 6 387	\$ 5 773	\$ 5 293
Unpaid labor..... 30	782	730	724	763	785
Net farm earnings..... 31	\$ 6 658	\$ 7 934	\$ 5 663	\$ 5 010	\$ 4 508
Rate earned on investment, percent..... 32	16.4	15.9	16.0	16.7	15.2
Labor and management earnings..... 33	\$ 5 210	\$ 6 025	\$ 4 470	\$ 4 128	\$ 3 594
Excess of sales over expenses..... 34	3 736	4 245	3 581	3 136	2 809
Increase in inventory..... 35	3 378	4 135	2 525	2 360	2 207
Number of farms included..... 36	62	47	44	53	35
Size of farm, acres..... 37	218	276	220	250	228
Gross earnings per acre..... 38	\$ 44.73	\$ 41.97	\$ 38.68	\$ 32.13	\$ 31.65
Total expenses per acre..... 39	14.26	13.19	12.90	12.07	11.91
Net earnings per acre..... 40	\$ 30.47	\$ 28.78	\$ 25.78	\$ 20.06	\$ 19.74
Value of land per acre..... 41	\$112	\$116	\$104	\$ 76	\$ 83
Value of improved land per acre..... 42	118	128	113	90	91
Value of improvements per acre..... 43	28	22	21	15	14
Total investment per acre..... 44	186	181	161	120	129
Percent of land area tillable..... 45	86.2	82.4	84.0	74.0	80.7
Percent of tillable land in—					
Corn..... 46	37.4	34.8	32.2	30.1	26.3
Oats..... 47	20.7	20.7	19.9	15.3	15.9
Wheat..... 48	.5	3.1	2.4	11.3	5.5
Soybeans for grain..... 49	3.0	7.0	8.1	9.8	13.6
Other cultivated crops..... 50	4.0	4.5	5.0	2.1	4.6
Legume hay and pasture..... 51	22.2	22.4	21.9	20.4	20.1
Nonlegume hay and pasture..... 52	12.2	7.5	10.5	11.0	14.0
Bushels per acre: Corn..... 53	77.2	72.2	70.4	60.6	62.6
Oats..... 54	45.4	47.7	40.1	40.4	47.6
Wheat..... 55	22.2	22.4	23.5	20.7	17.6
Barley..... 56	26.2	15.7	.....	.....	.....
Soybeans..... 57	26.5	27.6	29.3	21.0	20.7
Feed fed per acre to livestock..... 58	\$ 19.80	\$ 18.70	\$ 13.86	\$ 12.51	\$ 12.99
Returns for \$100 feed fed..... 59	180	178	184	194	184
Poultry returns per hen..... 60	4.50	3.27	3.94	4.46	3.17
Number of litters farrowed..... 61	26.7	34.4	23.8	26.6	21.5
Returns per litter..... 62	\$164	\$156	\$151	\$150	\$138
Dairy returns per cow..... 63	109	108	108	98	94
Horse and machinery cost per crop acre..... 64	\$ 6.34	\$ 6.41	\$ 6.01	\$ 6.18	\$ 5.63
Labor cost per crop acre..... 65	8.65	6.96	7.63	7.70	8.26
Improvement cost per acre..... 66	1.83	1.67	1.39	1.42	1.28
Taxes per acre..... 67	1.27	1.51	1.48	1.57	1.30

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—Continued

	Mercer	Warren	Stark	Hender- son	McLean	Tazewell	Ford	Living- ston	Wood- ford
1	\$37 026	\$39 814	\$39 075	\$33 772	\$62 641	\$45 165	\$44 017	\$47 218	\$51 951
2	21 059	25 081	25 200	21 187	41 585	29 333	30 593	31 647	34 307
3	4 564	5 013	5 009	3 441	7 205	5 656	4 179	5 855	6 298
4	392	312	212	335	254	271	295	291	280
5	3 793	2 493	1 384	2 227	3 735	2 212	1 848	1 744	2 581
6	1 171	1 123	1 070	1 102	924	590	404	350	789
7	112	152	459	57	147	72	182	225	197
8	69	77	68	78	100	99	95	149	110
9	3 665	3 158	3 091	3 012	5 366	4 125	3 935	4 103	4 564
10	2 201	2 405	2 582	2 333	3 325	2 807	2 486	2 854	2 825
11	\$ 9 415	\$ 9 229	\$ 9 833	\$ 8 266	\$14 263	\$10 758	\$ 9 056	\$10 058	\$10 907
12	3 078	2 034	989	1 167	2 888	1 501	1 349	1 198	2 068
13	488	328	460	170	709	917	376	582	537
14	4 675	4 074	3 964	4 075	3 852	2 703	1 557	1 655	3 078
15	105	134	465	77	320	290	127	83	362
16	218	229	296	185	312	417	345	749	404
17	299	274	283	269	288	329	252	326	299
18	.....	1 558	2 797	1 690	5 035	3 849	4 389	4 773	3 401
19	484	543	510	594	793	681	606	638	723
20	68	55	69	39	66	71	55	54	35
21	\$ 2 947	\$ 2 451	\$ 2 276	\$ 2 439	\$ 3 683	\$ 2 780	\$ 2 122	\$ 2 370	\$ 2 788
22	386	385	303	290	432	394	258	337	370
23	324	.....	.....	.....	.....	.....	.....	.....	.....
24	905	931	871	980	1 371	969	852	900	949
25	660	519	476	488	883	592	404	450	638
26	123	179	140	170	269	199	147	160	166
27	376	281	360	362	525	397	362	362	518
28	173	156	126	149	203	229	99	161	147
29	\$ 6 468	\$ 6 778	\$ 7 557	\$ 5 827	\$10 580	\$ 7 978	\$ 6 934	\$ 7 688	\$ 8 119
30	735	714	757	766	664	706	754	740	730
31	\$ 5 733	\$ 6 064	\$ 6 800	\$ 5 061	\$ 9 916	\$ 7 272	\$ 6 180	\$ 6 948	\$ 7 389
32	15.5	15.2	17.4	15.0	15.8	16.1	14.0	14.7	14.2
33	\$ 4 461	\$ 4 668	\$ 5 461	\$ 3 983	\$ 7 347	\$ 5 588	\$ 4 587	\$ 5 171	\$ 5 357
34	4 170	4 124	3 576	3 817	6 344	4 723	3 728	4 182	4 688
35	1 999	2 380	3 698	1 741	3 948	2 926	2 954	3 180	3 132
36	29	37	36	34	55	60	60	53	51
37	250	238	243	272	306	243	253	238	256
38	\$ 37.66	\$ 38.83	\$ 40.53	\$ 30.35	\$ 46.69	\$ 44.31	\$ 35.84	\$ 42.35	\$ 42.64
39	14.73	13.32	12.50	11.77	14.23	14.36	11.38	13.09	13.75
40	\$ 22.93	\$ 25.51	\$ 28.03	\$ 18.58	\$ 32.46	\$ 29.95	\$ 24.46	\$ 29.26	\$ 28.89
41	\$ 84	\$106	\$104	\$ 78	\$136	\$121	\$121	\$133	\$134
42	98	111	109	89	139	127	121	135	141
43	18	21	21	13	24	23	17	25	25
44	148	167	161	124	205	186	174	199	203
45	71.5	85.4	85.9	77.1	91.5	86.3	95.1	92.3	89.7
46	37.0	38.0	37.6	34.6	37.6	31.4	36.0	36.7	33.2
47	14.9	17.1	20.1	17.4	18.9	16.4	24.9	25.5	23.4
48	.....	.....	.....	.....	.....	.....	.....	.....	.....
49	2.3	7.7	4.9	13.3	11.6	10.9	7.8	6.5	5.4
50	4.9	3.2	6.4	5.6	1.7	4.3	4.5	2.0	6.5
51	23.7	20.5	20.9	18.3	19.7	21.9	20.6	24.8	24.4
52	17.2	13.1	9.4	8.2	6.2	5.2	5.7	2.8	5.7
53	67.9	66.7	72.7	61.8	74.5	73.5	66.0	71.7	74.4
54	37.4	44.2	39.5	36.9	50.0	41.1	48.8	56.1	45.3
55	.....	8.8	15.7	17.2	21.2	23.3	18.3	25.8	20.8
56	35.0	.....	.....	.....	.....	.....	5.0	.....	.....
57	19.5	24.2	29.7	21.4	28.6	29.6	25.2	24.2	27.6
58	\$ 19.32	\$ 17.04	\$ 13.17	\$ 12.63	\$ 15.73	\$ 12.87	\$ 8.87	\$ 9.73	\$ 14.74
59	182	173	200	171	172	194	176	194	177
60	3.08	3.53	4.03	2.86	4.08	4.27	3.45	4.74	3.82
61	31.1	32.7	25.2	26.2	22.4	16.7	13.5	11.0	19.6
62	\$149	\$132	\$168	\$156	\$171	\$154	\$145	\$136	\$155
63	115	96	102	86	126	149	100	117	123
64	\$ 7.84	\$ 6.82	\$ 5.84	\$ 6.66	\$ 6.52	\$ 6.58	\$ 4.93	\$ 6.00	\$ 5.88
65	10.16	7.46	7.10	7.28	6.48	7.49	5.83	6.71	7.37
66	1.54	1.62	1.25	1.06	1.42	1.61	1.02	1.42	1.45
67	1.50	1.18	1.48	1.33	1.72	1.64	1.43	1.53	2.03

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—*Continued*

Accounting items	LaSalle	Cham- paign	Iroquois	Vermilion	Macon
Capital investment, total..... 1	\$57 315	\$43 292	\$38 760	\$39 027	\$47 342
Land..... 2	35 871	32 040	25 505	26 767	34 551
Farm improvements..... 3	7 830	3 766	4 717	4 441	4 064
Horses..... 4	236	197	317	225	271
Cattle..... 5	3 759	1 118	1 456	1 299	1 677
Hogs..... 6	692	408	330	533	426
Sheep..... 7	159	54	276	46	57
Poultry..... 8	117	97	113	83	106
Feed and grain..... 9	5 397	3 084	3 620	2 967	3 629
Machinery and equipment..... 10	3 254	2 528	2 426	2 666	2 561
Receipts, net increases, total..... 11	\$12 655	\$ 9 159	\$ 8 356	\$ 9 412	\$10 049
Cattle..... 12	2 809	719	989	763	1 269
Dairy sales..... 13	961	428	530	577	438
Hogs..... 14	3 253	1 364	1 450	1 916	1 666
Sheep..... 15	150	60	191	48	60
Poultry and eggs..... 16	403	378	407	280	311
Farm products used in household..... 17	310	264	275	299	270
Feed and grain..... 18	4 047	5 438	4 003	4 910	5 291
AAA payment..... 19	673	462	464	543	724
Labor and miscellaneous..... 20	49	46	47	76	20
Expenses, net decreases, total..... 21	\$ 3 200	\$ 2 154	\$ 2 484	\$ 2 738	\$ 2 598
Farm improvements..... 22	517	270	397	347	336
Feed and grain..... 23	.....	.....	.....	.....	.....
Machinery and equipment..... 24	1 064	931	905	1 119	1 097
Hired labor..... 25	785	324	486	471	442
Crop expenses..... 26	237	136	203	209	140
Taxes..... 27	408	398	381	448	476
Livestock and miscellaneous..... 28	189	95	112	144	98
Receipts less expenses..... 29	\$ 9 455	\$ 7 005	\$ 5 872	\$ 6 674	\$ 7 451
Unpaid labor..... 30	753	730	860	807	845
Net farm earnings..... 31	\$ 8 702	\$ 6 275	\$ 5 012	\$ 5 867	\$ 6 606
Rate earned on investment, percent..... 32	15.2	14.5	12.9	15.0	14.0
Labor and management earnings..... 33	\$ 6 401	\$ 4 709	\$ 3 705	\$ 4 516	\$ 4 863
Excess of sales over expenses..... 34	5 453	4 152	3 633	4 144	4 776
Increase in inventory..... 35	3 692	2 589	1 964	2 231	2 405
Number of farms included..... 36	51	80	54	42	38
Size of farm, acres..... 37	279	243	254	268	266
Gross earnings per acre..... 38	\$ 45.39	\$ 37.66	\$ 32.91	\$ 35.16	\$ 37.82
Total expenses per acre..... 39	14.18	11.86	13.17	13.24	12.96
Net earnings per acre..... 40	\$ 31.21	\$ 25.80	\$ 19.74	\$ 21.92	\$ 24.86
Value of land per acre..... 41	\$129	\$132	\$100	\$100	\$130
Value of improved land per acre..... 42	136	134	103	104	131
Value of improvements per acre..... 43	28	15	19	17	15
Total investment per acre..... 44	206	178	153	146	178
Percent of land area tillable..... 45	87.7	92.0	91.5	90.7	94.3
Percent of tillable land in—					
Corn..... 46	38.2	32.8	32.5	30.2	29.6
Oats..... 47	22.7	12.9	20.2	13.2	9.8
Wheat..... 48	1.8	3.6	1.5	7.0	9.2
Soybeans for grain..... 49	4.4	26.5	13.0	21.6	24.0
Other cultivated crops..... 50	4.5	3.6	6.4	5.1	1.2
Legume hay and pasture..... 51	21.6	13.7	18.7	12.9	15.5
Nonlegume hay and pasture..... 52	6.8	6.9	7.7	10.0	10.7
Bushels per acre: Corn..... 53	74.6	66.5	61.0	67.1	70.0
Oats..... 54	53.1	46.4	49.8	50.6	46.6
Wheat..... 55	26.4	20.3	40.6	26.7	26.1
Barley..... 56	.....	28.0	30.0	.....	.....
Soybeans..... 57	22.5	29.3	23.5	26.1	25.3
Feed fed per acre to livestock..... 58	\$ 15.06	\$ 6.64	\$ 8.46	\$ 7.63	\$ 8.14
Returns for \$100 feed fed..... 59	186	195	176	187	183
Poultry returns per hen..... 60	3.88	3.95	3.94	3.71	3.74
Number of litters farrowed..... 61	22.5	12.4	12.1	16.4	15.2
Returns per litter..... 62	\$143	\$136	\$143	\$148	\$137
Dairy returns per cow..... 63	140	96	96	100	113
Horse and machinery cost per crop acre..... 64	\$ 5.84	\$ 5.39	\$ 5.42	\$ 5.96	\$ 5.83
Labor cost per crop acre..... 65	7.40	5.44	6.92	5.89	6.11
Improvement cost per acre..... 66	1.85	1.11	1.56	1.30	1.26
Taxes per acre..... 67	1.46	1.64	1.50	1.67	1.79

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—*Continued*

	Sangamon	Kankakee	Menard	Will	DeWitt	Kendall	Coles, Edgar	Moultrie	Piatt, Douglas
1	\$41 027	\$35 898	\$35 206	\$34 587	\$40 339	\$45 641	\$50 556	\$45 935	\$57 393
2	28 127	23 348	24 052	21 289	28 034	27 877	35 247	33 676	42 584
3	4 507	4 531	3 355	4 730	3 677	7 185	4 939	3 857	4 901
4	307	206	255	216	188	272	313	276	283
5	2 457	1 617	1 368	2 390	2 166	2 750	1 867	2 012	1 333
6	728	215	733	375	404	912	684	348	502
7	79	17	100	13	190	96	59	73	149
8	82	107	121	146	64	156	97	87	90
9	2 471	3 300	2 954	2 751	3 060	3 827	4 187	3 070	4 454
10	2 269	2 557	2 268	2 677	2 556	2 566	3 163	2 536	3 097
11	\$ 9 050	\$ 8 187	\$ 8 126	\$ 7 699	\$10 389	\$10 031	\$11 816	\$10 185	\$11 812
12	2 104	773	1 153	1 573	1 677	2 035	2 032	1 668	889
13	512	1 108	222	1 231	560	1 046	492	636	489
14	3 056	951	2 975	1 126	1 818	4 069	3 388	1 426	2 054
15	84	24	105	14	158	152	66	83	121
16	232	451	406	510	166	566	345	274	277
17	282	250	299	237	276	253	275	293	310
18	2 336	4 058	2 418	2 641	5 133	1 421	4 607	5 143	7 058
19	405	511	503	327	552	450	517	602	559
20	39	61	45	40	49	39	94	60	55
21	\$ 2 840	\$ 2 185	\$ 2 140	\$ 1 956	\$2 437	\$ 2 729	\$ 3 118	\$ 2 799	\$ 3 018
22	379	253	257	249	277	447	360	317	347
23									
24	1 041	901	843	819	942	904	1 173	1 143	1 171
25	694	417	428	364	505	622	760	552	606
26	176	199	145	137	143	227	192	199	254
27	393	294	354	267	456	341	494	476	525
28	157	121	113	120	114	188	139	112	115
29	\$ 6 210	\$ 6 002	\$ 5 986	\$ 5 743	\$ 7 952	\$ 7 302	\$ 8 698	\$ 7 386	\$ 8 794
30	713	783	771	878	806	764	778	761	770
31	\$ 5 497	\$ 5 219	\$ 5 215	\$ 4 865	\$ 7 146	\$ 6 538	\$ 7 920	\$ 6 625	\$ 8 024
32	13.4	14.5	14.8	14.1	17.7	14.3	15.7	14.4	14.0
33	\$ 4 008	\$ 4 041	\$ 4 022	\$ 3 762	\$ 5 699	\$ 4 865	\$ 5 955	\$ 4 922	\$ 5 733
34	3 237	3 360	3 643	3 173	4 064	3 885	4 863	4 437	5 613
35	2 691	2 392	2 044	2 333	3 612	3 164	3 560	2 656	2 871
36	47	40	31	38	30	31	42	41	36
37	267	239	248	214	268	232	324	303	307
38	\$ 33.86	\$ 34.30	\$ 32.78	\$ 35.94	\$ 38.78	\$ 43.22	\$ 36.41	\$ 33.66	\$ 38.52
39	13.29	12.44	11.74	13.23	12.11	15.05	12.00	11.77	12.35
40	\$ 20.57	\$ 21.86	\$ 21.04	\$ 22.71	\$ 26.67	\$ 28.17	\$ 24.41	\$ 21.89	\$ 26.17
41	\$105	\$ 98	\$ 97	\$ 99	\$105	\$120	\$109	\$111	\$139
42	108	102	100	100	110	126	113	115	140
43	17	19	14	22	14	31	15	13	16
44	153	150	142	161	151	197	156	152	187
45	88.4	91.0	84.6	90.2	86.9	86.6	88.8	89.5	93.3
46	29.5	32.2	28.8	33.2	33.4	35.7	28.4	28.4	29.5
47	10.0	20.6	10.0	24.4	14.0	26.4	11.3	8.8	10.7
48	12.5	1.7	17.9	2.1	5.6	1.3	9.6	6.9	7.1
49	15.6	16.4	13.1	12.4	19.2	5.0	17.6	25.3	29.6
50	3.0	7.4	5.2	4.3	2.2	5.4	4.6	6.1	2.6
51	16.5	14.0	15.3	14.9	17.1	18.6	15.8	16.8	13.6
52	12.9	7.7	9.7	8.7	8.5	7.6	12.7	7.7	6.9
53	65.3	61.6	66.2	56.1	72.7	66.4	70.8	69.2	73.2
54	50.6	50.8	45.2	52.7	52.5	56.5	50.9	50.5	49.6
55	23.6	23.3	23.1	26.5	22.8	28.1	22.4	23.2	23.4
56	10.0					50.0	27.1	11.1	
57	22.0	20.5	22.2	21.3	29.7	23.7	24.5	25.1	27.4
58	\$ 13.98	\$ 8.27	\$ 11.67	\$ 12.60	\$ 8.57	\$ 19.69	\$ 11.78	\$ 8.02	\$ 7.13
59	166	177	176	172	200	177	171	178	186
60	3.57	4.85	3.64	3.55	2.96	3.92	4.61	3.22	3.68
61	24.7	8.1	25.0	8.1	14.7	27.9	23.5	13.9	16.0
62	\$136	\$155	\$133	\$159	\$141	\$168	\$155	\$157	\$149
63	96	145	71	157	112	149	103	122	115
64	\$ 6.31	\$ 5.43	\$ 5.82	\$ 5.52	\$ 5.29	\$ 6.08	\$ 5.75	\$ 5.54	\$ 5.06
65	7.29	6.24	6.93	7.14	6.48	7.87	6.55	5.60	5.26
66	1.42	1.06	1.04	1.16	1.03	1.93	1.11	1.05	1.13
67	1.47	1.23	1.43	1.25	1.70	1.47	1.52	1.57	1.71

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—*Continued*

Accounting items	Logan	Mason	Cass	Grundy	Morgan
Capital investment, total..... 1	\$38 823	\$32 058	\$36 701	\$44 536	\$34 188
Land..... 2	27 156	20 950	25 084	29 566	22 643
Farm improvements..... 3	3 876	4 094	3 152	5 628	3 359
Horses..... 4	261	346	388	300	312
Cattle..... 5	1 603	832	1 768	1 536	1 787
Hogs..... 6	441	267	652	398	658
Sheep..... 7	29	2	68	13	254
Poultry..... 8	131	125	98	106	91
Feed and grain..... 9	2 826	3 191	3 233	4 125	2 768
Machinery and equipment..... 10	2 500	2 251	2 258	2 864	2 316
Receipts, net increases, total..... 11	\$ 8 774	\$ 6 634	\$ 8 743	\$11 106	\$ 9 014
Cattle..... 12	1 011	639	1 365	1 052	1 497
Dairy sales..... 13	340	237	279	1 134	451
Hogs..... 14	2 053	1 087	2 872	1 795	3 013
Sheep..... 15	49	11	115	18	132
Poultry and eggs..... 16	464	469	339	401	282
Farm products used in household..... 17	281	232	332	280	277
Feed and grain..... 18	3 950	3 337	2 787	5 707	2 809
AAA payment..... 19	583	590	624	675	505
Labor and miscellaneous..... 20	34	32	30	44	48
Expenses, net decreases, total..... 21	\$ 2 173	\$ 2 130	\$ 2 390	\$ 2 406	\$ 1 989
Farm improvements..... 22	277	288	271	335	224
Feed and grain..... 23	.....	.....	.....	.....	.....
Machinery and equipment..... 24	921	748	923	934	732
Hired labor..... 25	364	479	493	481	421
Crop expenses..... 26	160	155	170	194	180
Taxes..... 27	363	348	387	309	315
Livestock and miscellaneous..... 28	88	112	146	153	117
Receipts less expenses..... 29	\$ 6 601	\$ 4 504	\$ 6 353	\$ 8 700	\$ 7 025
Unpaid labor..... 30	810	709	903	786	838
Net farm earnings..... 31	\$ 5 791	\$ 3 795	\$ 5 450	\$ 7 914	\$ 6 187
Rate earned on investment, percent..... 32	14.9	11.8	14.8	17.8	18.1
Labor and management earnings..... 33	\$ 4 472	\$ 2 762	\$ 4 172	\$ 6 314	\$ 5 096
Excess of sales over expenses..... 34	3 885	2 517	3 909	5 432	4 491
Increase in inventory..... 35	2 435	1 755	2 112	2 988	2 257
Number of farms included..... 36	32	33	28	18	40
Size of farm, acres..... 37	243	303	310	266	235
Gross earnings per acre..... 38	\$ 36.15	\$ 21.87	\$ 28.17	\$ 41.69	\$ 38.39
Total expenses per acre..... 39	12.29	9.36	10.61	11.98	12.04
Net earnings per acre..... 40	\$ 23.86	\$ 12.51	\$ 17.56	\$ 29.71	\$ 26.35
Value of land per acre..... 41	\$112	\$ 69	\$ 81	\$111	\$ 96
Value of improved land per acre..... 42	116	71	94	117	103
Value of improvements per acre..... 43	16	13	10	21	14
Total investment per acre..... 44	160	106	118	167	146
Percent of land area tillable..... 45	90.8	90.2	78.0	87.4	84.4
Percent of tillable land in—					
Corn..... 46	30.0	26.4	27.0	36.8	30.0
Oats..... 47	12.3	12.6	11.8	20.6	10.4
Wheat..... 48	14.8	20.8	17.7	8	18.0
Soybeans for grain..... 49	15.5	5.6	9.2	15.3	13.8
Other cultivated crops..... 50	3.9	11.2	5.1	5.5	1.2
Legume hay and pasture..... 51	14.4	20.2	19.5	17.4	16.9
Nonlegume hay and pasture..... 52	9.1	3.2	9.7	3.6	9.7
Bushels per acre: Corn..... 53	68.4	47.3	65.5	74.2	69.5
Oats..... 54	50.7	35.7	40.0	55.1	45.1
Wheat..... 55	23.4	35.7	25.3	23.0	25.4
Barley..... 56	.....	10.0	.....	.....	15.0
Soybeans..... 57	25.8	20.2	20.6	23.5	24.4
Feed fed per acre..... 58	\$ 8.64	\$ 4.60	\$ 8.93	\$ 8.41	\$ 12.64
Returns for \$100 feed fed..... 59	197	188	189	206	188
Poultry returns per hen..... 60	3.71	3.51	3.50	4.62	3.45
Number of litters farrowed..... 61	17.0	11.1	20.0	12.6	23.1
Returns per litter..... 62	\$151	\$145	\$125	\$144	\$145
Dairy returns per cow..... 63	102	83	79	153	101
Horse and machinery cost per crop acre..... 64	\$ 5.45	\$ 4.26	\$ 5.97	\$ 5.18	\$ 5.43
Labor cost per crop acre..... 65	6.14	5.33	7.11	6.10	7.45
Improvement cost per acre..... 66	1.14	.95	.87	1.26	.95
Taxes per acre..... 67	1.50	1.15	1.25	1.16	1.34

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—Continued

	Macou-pin	Shelby	Christian	Mont-gomery	Adams	Schuyler, Scott, Brown	Jersey	Greene	Pike
1	\$28 185	\$28 372	\$33 031	\$22 127	\$26 105	\$25 022	\$26 245	\$31 406	\$25 231
2	14 972	17 877	22 236	12 837	14 939	15 088	14 797	18 308	14 479
3	4 685	3 505	3 390	3 114	3 916	3 425	3 886	4 493	3 419
4	312	214	224	388	307	309	386	379	325
5	2 673	1 332	1 736	1 447	1 921	1 554	2 001	2 750	2 385
6	469	316	501	504	775	674	554	697	1 104
7	117	72	55	145	129	97	76	82	140
8	123	112	90	82	73	54	114	69	55
9	2 581	2 544	2 626	1 995	2 127	2 137	2 283	2 519	1 814
10	2 253	2 400	2 173	1 615	1 918	1 684	2 148	2 109	1 510
11	\$ 7 918	\$ 6 683	\$ 8 482	\$ 6 143	\$ 6 750	\$ 6 778	\$ 7 353	\$ 7 824	\$ 7 964
12	2 025	930	1 516	1 094	1 519	1 256	970	2 683	1 872
13	1 541	853	604	582	361	214	1 642	862	157
14	1 977	1 289	2 288	2 256	3 003	2 928	2 319	3 002	4 897
15	112	103	88	182	148	94	86	103	194
16	516	325	282	261	261	152	360	211	197
17	278	280	265	292	261	272	335	299	297
18	988	2 642	2 966	1 174	851	1 439	1 483	269	...
19	388	212	430	256	311	400	122	330	277
20	93	49	43	46	35	23	36	65	73
21	\$ 2 128	\$ 2 155	\$ 2 061	\$ 1 682	\$ 1 860	\$ 1 879	\$ 2 231	\$ 2 304	\$ 2 019
22	368	301	290	241	314	232	337	281	304
23	...	...	...	...	...	...	...	...	177
24	794	899	778	656	666	608	807	821	550
25	440	364	387	305	372	452	524	559	454
26	142	158	135	127	112	141	133	163	122
27	250	308	359	243	261	332	266	333	276
28	134	125	112	110	135	114	164	147	136
29	\$ 5 790	\$ 4 528	\$ 6 421	\$ 4 461	\$ 4 890	\$ 4 899	\$ 5 122	\$ 5 520	\$ 5 945
30	932	892	822	841	839	784	1 074	782	744
31	\$ 4 858	\$ 3 636	\$ 5 599	\$ 3 620	\$ 4 051	\$ 4 115	\$ 4 048	\$ 4 738	\$ 5 201
32	17.2	12.8	17.0	16.4	15.5	16.4	15.4	15.1	20.6
33	\$ 4 061	\$ 2 844	\$ 4 553	\$ 3 118	\$ 3 307	\$ 3 437	\$ 3 377	\$ 3 750	\$ 4 549
34	3 228	2 657	3 422	2 422	2 252	2 764	2 554	2 753	2 459
35	2 284	1 591	2 734	1 747	2 377	1 863	2 233	2 468	3 189
36	36	41	39	36	39	46	26	29	30
37	253	260	228	225	250	265	244	266	279
38	\$ 31.25	\$ 25.68	\$ 37.17	\$ 27.27	\$ 26.95	\$ 25.56	\$ 30.14	\$ 29.39	\$ 28.57
39	12.08	11.71	12.63	11.20	10.78	10.04	13.55	11.59	9.91
40	\$ 19.17	\$ 13.97	\$ 24.54	\$ 16.07	\$ 16.17	\$ 15.52	\$ 16.59	\$ 17.80	\$ 18.66
41	\$ 59	\$ 69	\$ 97	\$ 57	\$ 60	\$ 57	\$ 61	\$ 69	\$ 52
42	64	73	100	62	67	68	69	78	61
43	18	13	15	14	16	13	16	17	12
44	111	109	145	98	104	94	108	118	91
45	79.0	84.7	91.9	84.8	76.0	68.4	83.0	73.4	74.3
46	21.4	26.2	23.9	21.0	22.7	27.6	26.5	30.2	25.7
47	9.7	9.9	6.8	9.7	17.6	13.7	6.1	7.3	12.8
48	15.0	8.5	12.3	13.5	9.5	11.1	17.8	14.7	5.8
49	8.4	17.9	28.5	14.2	8.6	6.7	2.4	5.7	1.1
50	8.1	4.4	3.0	8.7	4.5	4.1	7.1	6.5	6.1
51	23.4	16.8	12.9	16.5	24.8	26.1	25.3	25.1	29.6
52	14.0	16.3	12.6	16.4	12.3	10.7	14.8	10.5	18.9
53	65.1	57.1	66.5	61.0	57.9	63.0	66.0	65.4	68.4
54	43.2	38.7	45.2	45.6	43.8	45.9	38.1	41.0	38.0
55	23.9	20.1	19.8	17.9	21.4	22.9	24.3	38.5	22.2
56	30.6	25.0	20.0	25.1	...	16.7	33.0	26.8	26.6
57	19.2	19.7	26.0	23.0	21.3	18.5	17.6	18.9	17.7
58	\$ 13.48	\$ 7.41	\$ 12.21	\$ 11.21	\$ 11.30	\$ 9.21	\$ 11.57	\$ 15.26	\$ 14.31
59	187	191	179	182	194	199	200	175	189
60	4.44	2.70	3.29	2.95	3.40	3.16	3.55	3.58	3.29
61	15.4	10.1	15.8	14.8	23.1	19.7	19.2	19.3	35.0
62	\$147	\$156	\$141	\$160	\$144	\$136	\$144	\$149	\$140
63	165	114	108	101	86	75	146	130	78
64	\$ 6.07	\$ 5.92	\$ 5.21	\$ 5.82	\$ 6.25	\$ 5.96	\$ 7.14	\$ 6.89	\$ 5.80
65	8.36	7.09	6.85	7.67	9.04	9.48	11.03	9.04	9.80
66	1.45	1.16	1.27	1.07	1.25	.87	1.38	1.06	1.09
67	.99	1.18	1.57	1.08	1.04	1.25	1.09	1.25	.99

(Continued)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—Continued

Accounting items	Madison	Randolph	St. Clair	Monroe	Bond
Capital investment, total..... 1	\$18 339	\$15 782	\$22 775	\$20 104	\$21 224
Land..... 2	9 428	8 058	12 946	12 341	11 201
Farm improvements..... 3	2 845	2 584	3 490	2 478	3 501
Horses..... 4	346	384	504	380	249
Cattle..... 5	1 513	1 391	1 152	668	1 739
Hogs..... 6	247	185	306	255	434
Sheep..... 7	26	41	25	17	145
Poultry..... 8	112	103	174	150	68
Feed and grain..... 9	1 904	1 557	1 980	1 836	1 806
Machinery and equipment..... 10	1 918	1 479	2 198	1 979	2 081
Receipts, net increases, total..... 11	\$ 4 697	\$ 3 757	\$ 4 882	\$ 4 595	\$ 5 567
Cattle..... 12	574	824	560	294	724
Dairy sales..... 13	1 685	844	1 017	767	1 797
Hogs..... 14	899	895	1 186	976	2 146
Sheep..... 15	23	41	33	27	190
Poultry and eggs..... 16	359	378	517	597	217
Farm products used in household..... 17	263	265	342	320	253
Feed and grain..... 18	713	319	1 132	1 575	.....
AAA payment..... 19	132	124	65	10	175
Labor and miscellaneous..... 20	49	67	30	29	65
Expenses, net decreases, total..... 21	\$ 1 476	\$ 1 228	\$ 1 733	\$ 1 578	\$ 2 015
Farm improvements..... 22	200	176	235	167	318
Feed and grain..... 23	.....	.....	.....	.....	68
Machinery and equipment..... 24	619	514	719	573	806
Hired labor..... 25	269	192	339	342	361
Crop expenses..... 26	116	97	113	132	132
Taxes..... 27	161	179	238	226	216
Livestock and miscellaneous..... 28	111	70	89	138	114
Receipts less expenses..... 29	\$ 3 221	\$ 2 529	\$ 3 149	\$ 3 017	\$ 3 552
Unpaid labor..... 30	825	823	833	877	664
Net farm earnings..... 31	\$ 2 396	\$ 1 706	\$ 2 316	\$ 2 140	\$ 2 888
Rate earned on investment, percent..... 32	13.1	10.8	10.2	10.6	13.6
Labor and management earnings..... 33	\$ 1 974	\$ 1 424	\$ 1 683	\$ 1 643	\$ 2 263
Excess of sales over expenses..... 34	2 128	1 669	1 567	1 611	2 116
Increase in inventory..... 35	830	595	1 240	1 086	1 183
Number of farms included..... 36	81	48	32	24	28
Size of farm, acres..... 37	172	228	218	224	285
Gross earnings per acre..... 38	\$ 27.32	\$ 16.49	\$ 22.41	\$ 20.50	\$ 19.51
Total expenses per acre..... 39	13.38	9.00	11.78	10.95	9.39
Net earnings per acre..... 40	\$ 13.94	\$ 7.49	\$ 10.63	\$ 9.55	\$ 10.12
Value of land per acre..... 41	\$ 55	\$ 35	\$ 59	\$ 55	\$ 39
Value of improved land per acre..... 42	58	38	64	65	42
Value of improvements per acre..... 43	17	11	16	11	12
Total investment per acre..... 44	107	69	105	90	74
Percent of land area tillable..... 45	77.8	82.6	80.4	77.1	79.7
Percent of tillable land in—					
Corn..... 46	20.5	11.6	18.7	15.6	15.4
Oats..... 47	7.0	7.8	10.2	4.9	10.5
Wheat..... 48	24.7	24.3	26.8	33.2	12.0
Soybeans for grain..... 49	2.1	1.5	4.8	2.3	5.2
Other cultivated crops..... 50	12.4	13.3	13.3	11.0	13.9
Legume hay and pasture..... 51	24.2	34.1	19.6	28.2	26.2
Nonlegume hay and pasture..... 52	9.1	7.4	6.6	4.8	16.8
Bushels per acre: Corn..... 53	52.2	30.9	45.1	50.6	43.8
Oats..... 54	41.3	35.5	38.9	37.4	31.2
Wheat..... 55	22.4	35.6	43.8	26.5	16.9
Barley..... 56	31.5	32.9	40.0	37.1	29.8
Soybeans..... 57	9.3	5.2	9.5	7.7	9.1
Feed fed per acre..... 58	\$ 10.55	\$ 7.70	\$ 8.12	\$ 6.92	\$ 9.76
Returns for \$100 feed fed..... 59	206	181	202	186	189
Poultry returns per hen..... 60	3.36	3.15	3.25	3.47	2.85
Number of litters farrowed..... 61	7.7	7.2	9.8	9.1	14.5
Returns per litter..... 62	\$139	\$151	\$147	\$128	\$149
Dairy returns per cow..... 63	151	115	137	129	160
Horse and machinery cost per crop acre..... 64	\$ 7.14	\$ 5.23	\$ 6.81	\$ 6.30	\$ 6.10
Labor cost per crop acre..... 65	9.42	7.90	8.36	9.33	6.66
Improvement cost per acre..... 66	1.16	.77	1.08	.75	1.11
Taxes per acre..... 67	94	.79	1.09	1.01	.76

(Concluded)

TABLE 13.—SUMMARY OF BUSINESS RECORDS FROM 3,090 ILLINOIS FARMS BY COUNTIES AND BY GROUPS OF COUNTIES, 1941—*Concluded*

	Clinton, Washing- ton	Effingham, Fayette	Jefferson, Franklin, Hamilton, William- son	Clark, Jasper, Crawford	Richland, Clay, Marion	Edwards	Wabash, Lawrence, White, Gallatin	Alexander, Jackson, Johnson, Pope, Perry, Massac, Union
1	\$17 778	\$15 945	\$11 836	\$17 344	\$12 638	\$14 603	\$16 085	\$12 384
2	9 781	7 961	6 078	9 327	6 565	8 511	9 414	6 049
3	2 553	2 666	1 992	2 711	1 933	1 832	2 256	2 299
4	373	313	328	218	302	295	276	396
5	1 077	1 404	905	1 206	1 102	847	892	878
6	214	167	216	406	212	309	247	199
7	42	121	70	53	210	83	64	40
8	170	163	92	152	102	142	103	97
9	1 582	1 564	836	1 569	873	1 287	1 381	1 068
10	1 986	1 586	1 319	1 702	1 339	1 297	1 452	1 358
11	\$ 3 887	\$ 4 437	\$ 3 101	\$ 4 813	\$ 3 655	\$ 4 091	\$ 4 610	\$ 3 315
12	456	980	562	835	572	585	646	569
13	1 259	858	317	350	481	179	315	559
14	660	786	974	1 743	787	1 425	1 242	825
15	49	166	96	52	224	91	83	47
16	517	453	302	491	315	496	241	260
17	268	303	301	298	268	282	251	278
18	468	668	349	795	797	812	1 612	591
19	170	181	148	196	156	176	193	137
20	40	42	52	53	55	45	27	49
21	\$ 1 404	\$ 1 286	\$ 1 266	\$ 1 485	\$ 1 131	\$ 1 319	\$ 1 370	\$ 1 464
22	172	190	202	184	203	185	205	239
23	.....	.....	.....	.....	.....	.....	.....	.....
24	574	493	483	609	410	492	524	535
25	264	249	228	290	178	250	222	313
26	148	99	188	126	100	135	143	156
27	152	163	128	190	178	205	204	159
28	94	92	37	86	62	52	72	62
29	\$ 2 483	\$ 3 151	\$ 1 835	\$ 3 328	\$ 2 524	\$ 2 772	\$ 3 240	\$ 1 851
30	843	734	621	725	690	633	660	663
31	\$ 1 640	\$ 2 417	\$ 1 214	\$ 2 603	\$ 1 834	\$ 2 139	\$ 2 580	\$ 1 188
32	9.2	15.2	10.3	15.0	14.5	14.6	16.0	9.6
33	\$ 1 256	\$ 2 070	\$ 1 064	\$ 2 238	\$ 1 652	\$ 1 886	\$ 2 235	\$ 1 018
34	1 712	1 718	882	2 026	1 286	1 425	1 564	990
35	503	1 130	652	1 004	970	1 065	1 425	583
36	49	45	45	46	30	41	39	34
37	194	237	232	237	284	218	224	232
38	\$ 20.05	\$ 18.70	\$ 13.37	\$ 20.29	\$ 12.85	\$ 18.73	\$ 20.58	\$ 14.31
39	11.59	8.51	8.13	9.32	6.40	8.94	9.06	9.18
40	\$ 8.46	\$ 10.19	\$ 5.24	\$ 10.97	\$ 6.45	\$ 9.79	\$ 11.52	\$ 5.13
41	\$ 50	\$ 34	\$ 26	\$ 39	\$ 23	\$ 39	\$ 42	\$ 26
42	54	37	27	42	24	42	45	30
43	13	11	9	11	7	8	10	10
44	92	67	51	73	44	67	72	53
45	85.0	78.8	84.0	81.0	80.6	83.7	83.3	75.6
46	14.0	20.2	16.2	25.2	15.7	21.5	24.4	15.5
47	13.5	9.0	5.0	5.6	7.2	8.6	5.5	4.7
48	27.7	9.7	10.2	12.7	5.3	12.8	19.0	11.8
49	1.8	7.0	1.9	5.8	4.8	4.2	5.8	2.8
50	12.6	9.5	11.9	10.7	10.9	13.3	12.7	15.5
51	19.7	18.9	32.5	19.9	17.4	21.8	22.1	30.6
52	10.7	25.7	22.3	20.1	38.7	17.8	10.5	19.1
53	32.4	40.9	26.6	50.9	27.9	47.1	48.6	34.0
54	38.1	30.5	26.2	35.4	34.2	43.7	37.9	29.8
55	16.8	35.0	42.2	19.8	19.0	35.8	23.4	21.5
56	32.4	21.3	27.2	24.3	27.2	36.5	30.6	27.8
57	10.3	13.3	8.6	12.2	10.5	12.6	19.2	13.5
58	\$ 8.98	\$ 6.84	\$ 5.28	\$ 8.94	\$ 4.05	\$ 7.33	\$ 6.09	\$ 5.22
59	181	214	202	174	224	187	200	204
60	2.93	2.75	3.67	3.35	2.95	3.07	2.91	3.05
61	6.5	6.8	8.3	12.9	6.4	10.4	9.0	7.6
62	\$142	\$158	\$157	\$146	\$147	\$155	\$156	\$135
63	149	120	82	91	89	87	93	98
64	\$ 5.85	\$ 4.78	\$ 5.15	\$ 5.20	\$ 3.50	\$ 5.21	\$ 4.86	6.47
65	8.45	7.22	7.11	7.17	5.29	6.86	6.58	9.03
66	.89	.80	.87	.78	.71	.85	.92	1.03
67	.78	.69	.55	.80	.63	.94	.91	.69

Agricultural Economics
RADIO BROADCASTS
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580 Kilocycles

Every Friday at 12:30 p.m.

August 7—Rural Life Forum. "Rural Organizations and the Wartime Educational Program"—D. E. Lindstrom, F. E. Longmire.

"Market Review and Farm Outlook"—G. L. Jordan.¹

August 14—"Farm Earnings in Wartime"—P. E. Johnston, J. B. Cunningham, W. N. Thompson.

August 21—"Planning for Wartime Maximum Production"—H. C. M. Case, E. L. Sauer, S. I. Warren.

August 28—"Can We Store the Soybean Crop?"—L. J. Norton, L. F. Stice.

September 4—Rural Life Forum. "How to Plan Successful Neighborhood and Community Meetings to Meet Wartime Needs"—D. E. Lindstrom, E. H. Regnier.

September 11—"Planning Feeding Cattle Operations for 1943"—P. E. Johnston, H. G. Russell, L. F. Stice.

September 18—"Harvesting Costs"—R. H. Wilcox, R. C. Ross, W. E. McDaniel.

September 25—"How Is the Battle Against Inflation Going?"—E. J. Working, R. J. Mutti, A. H. Harrington.

¹Each Friday, 12:48 p.m., "Market Review and Farm Outlook"—G. L. Jordan.

Footnotes for the last page:

¹⁻¹²The first source is for annual data; the second is for current data from which tables may be brought to date.

¹Survey of Current Business, 1936 supplement, U. S. Dept. of Commerce; Subsequent monthly issues. ²Same as footnote 1. ³Illinois Crop and Livestock Statistics, Circular 438 (1937); monthly mimeographs of Statistical Tables for Illinois Crop Report, converted from 1910-1914 = 100 to 1924-1929 = 100 by multiplying by .7151. ⁴Monthly Local Market Price Report, Bureau of Agricultural Economics, U.S.D.A. ⁵Calculated from data furnished by Bureau of Agricultural Economics; Survey of Current Business, seasonally adjusted. ⁶Calculated by Department of Agricultural Economics, University of Illinois, seasonally adjusted. Data on receipts from sale of principal farm products (government payments not included) from Farm Income Situation, Bureau of Agricultural Economics monthly mimeograph. ⁷Obtained by dividing Index of Illinois Farm Income (column 6) by Index of Prices Paid by Farmers (column 4). ⁸For 1929-1940 inclusive from Poultry and Egg Situation, September, 1941, p. 25; currently, adjusted for seasonal variation, beginning with October, 1941, issue. ⁹Special B. L. S. release, Jan. 24, 1941; Survey of Current Business, monthly issues, unadjusted for seasonal variation. ¹⁰Federal Reserve Bulletin of Federal Reserve Board, September, 1933, and subsequent issues; Survey of Current Business, seasonally adjusted. ¹¹Preliminary estimate. ¹²Illinois Crop and Livestock Statistics, Cir. 438; Monthly price releases, State Agricultural Statistician.

UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE
URBANA, ILLINOIS

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H. P. Rusk

Director, Extension Service in
Agriculture and Home Economics

FREE—Cooperative Agricultural Extension
Work. Acts of May 8 and June 30, 1914

TABLE A.—INDEXES OF UNITED STATES AGRICULTURAL AND BUSINESS CONDITIONS

Year and month	Commodity prices				Income from farm marketings			Non-agricultural employee's compensation ⁸	Factory payrolls ⁹	Industrial production ¹⁰
	Wholesale prices		Illinois farm prices ³	Prices paid by farmers ⁴	U. S. in money ⁵	Illinois				
	All commodities ¹	Farm products ²				In money ⁶	In purchasing power ⁷			
Base period....	1926	1926	1924-29	1924-29	1924-29	1924-29	1924-29	1924-29	1923-25	1935-39
1929.....	95	105	104	99	103	103	104	110	110	110
1930.....	86	88	89	94	83	87	93	100	89	91
1931.....	73	65	62	80	58	58	72	84	68	75
1932.....	65	48	41	69	43	43	62	66	47	58
1933.....	66	51	45	71	49	51	72	62	50	69
1934.....	75	65	61	80	57	55	69	72	64	75
1935.....	80	79	82	81	64	65	80	78	74	87
1936.....	81	81	86	80	74	82	103	89	86	103
1937.....	86	86	96	84	80	87	103	98	102	113
1938.....	79	69	69	80	72	81	101	92	78	89
1939.....	77	65	65	78	72	81	97	99	92	108
1940.....	78	68	69	79	78	90	113	106	105	123
1941.....	87	82	87	85	101	116	136	129	149	155
1941 June.....	87	82	87	83	96	105	126	130	152	159
July.....	89	86	91	84	98	103	123	131	153	160
Aug.....	90	87	92	86	102	111	129	135	158	160
Sept.....	92	91	99	88	110	123	140	134	163	161
Oct.....	92	90	93	90	112	161	179	134	167	163
Nov.....	92	91	93	91	112	142	156	135	165	166
Dec.....	94	95	99	92	134	162	176	139	170	167
1942 Jan.....	96	100	104	94	132	146	155	143	174	171
Feb.....	97	101	106	95	127	134	141	147	178	172
Mar.....	98	103	108	97	127	154	159	...	183	171
Apr.....	99	104	111	98	136	143	...	...	187	173
May.....	99	104	112 ¹¹	99	130	...	...	...	193	176 ¹¹
June.....	98 ¹¹	105 ¹¹	...	99	...	...	...	...	...	...

TABLE B.—PRICES OF ILLINOIS FARM PRODUCTS¹²

Product	Calendar year average			June 1941	Current months		
	1924-29	1940	1941		April	May	June
Corn, bu.....	\$.81	\$.56	\$.63	\$.68	\$.76	\$.78	\$.79
Oats, bu.....	.42	.32	.36	.33	.52	.52	.45
Wheat, bu.....	1.30	.81	.93	.90	1.10	1.10	1.06
Barley, bu.....	.66	.46	.55	.50	.78	.78	.74
Soybeans, bu.....	1.94	.82	1.24	1.25	1.73	1.68	1.58
Hogs, cwt.....	9.97	5.54	9.37	9.30	13.70	13.40	13.60
Beef cattle, cwt.....	8.57	8.84	10.07	9.90	11.90	11.90	11.60
Lambs, cwt.....	12.22	8.52	9.85	10.20	11.40	12.20	13.10
Milk cows, head.....	78.00	65.00	80.00	80.00	100.00	100.00	98.00
Veal calves, cwt.....	11.27	9.63	11.19	10.20	13.50	13.40	13.30
Sheep, cwt.....	6.52	3.44	4.43	4.35	6.00	6.10	6.00
Butterfat, lb.....	.42	.27	.33	.34	.36	.37	.36
Milk, cwt.....	2.32	1.67	2.05	1.90	2.20	2.20	2.10
Eggs, doz.....	.30	.17	.22	.22	.25	.26	.26
Chickens, lb.....	.21	.13	.15	.16	.19	.19	.19
Wool, lb.....	.36	.30	.37	.40	.41	.43	.40
Apples, bu.....	1.59	1.14	1.07	1.25	1.65	2.10	1.75
Hay, ton.....	13.88	6.68	8.49	7.40	13.00	12.60	10.60
Potatoes, bu.....	1.39	.83	.82	.95	1.40	1.60	1.75

¹⁻¹²For sources of data in tables see previous page.

Cooperative Extension Work in Agriculture and Home Economics: University of Illinois, College of Agriculture, and the United States Department of Agriculture cooperating. H. P. Rusk, Director. Acts approved by Congress May 8 and June 30, 1914

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA ONE Chicago Dairy Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON EIGHTY-FIVE FARMS IN FARMING-TYPE AREA 1, 1941

By P. E. Johnston, J. B. Curningham, and W. D. Buddemeier^{1/}

Farm earnings of accounting farms in Farming-Type Area 1 were much higher in 1941 than in 1940. The average net earnings per acre were \$23.89 in 1941, \$14.91 in 1940, \$10.64 in 1939, and \$9.55 in 1938. The items considered in calculating the net earnings included: cash receipts; cash expenses; inventory changes; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940.



Farming-Type Area 1
Dairy and Truck

Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, especially for cattle, feed, and machinery, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all the farms in the area; the crop yields were above average; and the farm operators were more skillful than average in the organization and operation of their farms. Therefore, the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his business operations in order to locate the strong and weak places in the management of his farm. The data in Tables 1 to 7 and Figure 1 are particularly well adapted for

such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.

^{1/} W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

J. H. Brock, McHenry County
A. C. Johnson, Kane County
D. M. Chalcraft, Boone County

H. S. Wright, DuPage County
Ray T. Nicholas, Lake County
C. A. Hughes, Cook County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 1, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	85	81	87	78
Acres per farm - - - - -		181	180	171	186
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 204	\$ 81	\$ -4	\$ 8
Livestock- - - - -		845	396	430	487
Feed and grain - - - - -		962	352	374	299
Machinery and equipment- - - - -		363	42	79	198
Automobile (farm share)- - - - -		39	1	8	-6
Total - - - - -	\$	\$2 413	\$ 872	\$ 887	\$ 586
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 6	\$ 14	\$ 2	\$ 22
Horses - - - - -		41	53	35	64
Productive livestock: Cattle - - - - -		2 969	2 079	1 085	1 042
Dairy sales		3 285	2 586	2 130	2 483
Hogs - - - - -		1 120	698	492	582
Sheep- - - - -		99	31	86	126
Poultry- - - - -		91	94	91	79
Egg sales-		271	205	195	212
Total productive livestock - - - - -	()	(7 835)	(5 693)	(4 079)	(4 524)
Feed and grain - - - - -		666	532	414	366
Machinery and equipment- - - - -		224	181	153	167
Automobile (farm share)- - - - -		35	28	23	10
Labor off farm - - - - -		30	62	38	30
Miscellaneous- - - - -		23	7	9	6
AAA payments - - - - -		275	282	311	137
Total- - - - -	\$	\$9 135	\$6 852	\$5 064	\$5 326
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 626	\$ 421	\$ 289	\$ 322
Horses - - - - -		26	52	40	45
Productive livestock: Cattle - - - - -		2 030	1 255	747	572
Hogs - - - - -		115	46	86	72
Sheep- - - - -		58	34	61	97
Poultry- - - - -		45	37	37	37
Total productive livestock - - - - -	()	(2 248)	(1 372)	(931)	(778)
Feed and grain - - - - -		935	677	517	476
Machinery and equipment- - - - -		1 375	810	721	883
Automobile (farm share)- - - - -		181	123	110	79
Hired labor- - - - -		706	523	490	503
Miscellaneous- - - - -		34	28	34	25
Crop expense - - - - -		203	190	178	202
Livestock expense- - - - -		103	79	80	80
Taxes- - - - -		270	276	244	252
Total- - - - -	\$	\$6 707	\$4 551	\$3 634	\$3 645
<u>Summary</u>					
Cash balance - - - - -	\$	\$2 428	\$2 301	\$1 430	\$1 681
Farm products used in household-		279	253	241	267
Total inventory change - - - - -		2 413	872	887	586
Receipts less expenses - - - - -	\$	\$5 120	\$3 426	\$2 558	\$2 534
Total unpaid labor - - - - -		787	743	740	758
Net earnings per farm- - - - -	\$	\$4 333	\$2 683	\$1 818	\$1 776
Net earnings per acre- - - - -	\$	\$23.89	\$14.91	\$10.64	\$ 9.55

Inventory changes. The year 1941 was the ninth consecutive year of increasing inventories. The increases during the past four years ranged from \$2,413 in 1941 to \$586 in 1938 (Table 1). The largest increases in 1941 were for live-stock and feed and grain. The average amounts of grain on hand in Area 1 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	1 808	2 373
Oats	959	965
Wheat	48	34
Soybeans	66	78

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$2,428, or by a larger margin than that for any other year during the past four. Cash balance, the difference between cash receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$55 per month in 1941 and at \$50 per month in each of the three previous years.

The net earnings per farm averaged \$4,333 in 1941 compared with \$2,683 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 1. For example, 16 farms earned less than ten percent on their investment, with an average rate earned of 7.6 percent; but 32 farms earned sixteen percent or more, with an average rate earned of 19.0 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$1,304 for labor and management earnings contrasted with \$4,563 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 10.00	16	7.6	169	\$30,762	\$5,998	\$2,330	\$1,304
10.00 to 15.99	37	13.2	197	32,882	8,199	4,352	3,300
16.00 or more	32	19.0	170	27,939	8,750	5,312	4,563

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 1, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	14.2%	14.2%
Number of farms- - - - -	--	--	85
Acres in farm - - - - -	_____	181	181
Acres tillable - - - - -	_____	150	150
Acres in crops - - - - -	_____	126	126
Gross earnings per acre- - - - -	\$ _____	\$ _____ a/	\$42.79
Gross expenses per acre- - - - -	_____	_____	18.90
Net earnings per acre - - - - -	\$ _____	\$ _____	\$23.89
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 78	\$ 78
Value of improved land per acre- - - - -	_____	_____ a/	81
Value of improvements per acre - - - - -	_____	_____ e/	38
Total investment per acre- - - - -	_____	169	169
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ a/	82.5
Percent of tillable land in:			
Corn - - - - -	_____	_____	32.9
Oats - - - - -	_____	_____	18.8
Wheat- - - - -	_____	_____	1.1
Soybeans - - - - -	_____	_____	3.5
Other crops- - - - -	_____	_____	8.2
Legume hay and pasture - - - - -	_____	_____	21.4
Nonlegume hay and pasture- - - - -	_____	_____	14.1
<u>Crop Yields</u>			
Corn, bu.- - - - -	_____	_____ b/	70.7
Oats, bu.- - - - -	_____	_____	56.6
Barley, bu.- - - - -	_____	_____	40.7
<u>Livestock Factors</u>			
Value of feed fed to productive livestock-	\$ _____	\$3 728	\$3 728
Feed fed per acre to productive livestock-	_____	_____ c/	20.55
Returns per \$100 worth of feed fed - - - -	_____	_____	179
Poultry returns per hen- - - - -	_____	3.44	3.44
Number of litters farrowed - - - - -	_____	9.7	9.7
Number of pigs weaned per litter - - - - -	_____	6.6	6.6
Returns per litter farrowed- - - - -	\$ _____	\$ 166	\$ 166
Average number of cows milked- - - - -	_____	19.5	19.5
Number of cows milked per 100 acres- - - -	_____	10.8	10.8
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ c/	\$ 173
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - -	\$ _____	\$ _____ d/	\$ 8.46
Labor cost per crop acre - - - - -	_____	_____	11.59
Total months of labor- - - - -	_____	_____ c/	24.4
Number of work horses- - - - -	_____	_____	3.2
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$ 2.29
Land tax per acre- - - - -	_____	_____ a/	1.30

Source of Standards:

- a/ Table 3, value of improved land.
b/ Fig. 1, value of improved land.
c/ Table 4, source of income.

- d/ Table 6, size of farm and number of milk cows per 100 acres.
e/ Table 5, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 1, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to productive l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Gross expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Improvement cost per acre
				Corn, bu.	Oats, bu.	Barley, bu.									
24.2	381								5.94	241					
22.2	341								5.44	226					
20.2	301								4.94	211					
18.2	261								4.44	196					
16.2	221								3.94	181					
14.2	181								3.44	166					
12.2	141								2.94	151					
10.2	101								2.44	136					
8.2	61								1.94	121					
6.2	--								1.44	106					
4.2	--								.94	91					
2%	40	\$3	2%	4	4	3	\$2	\$15	\$50	\$15	\$10	\$2	\$.50	\$1	\$.50

*Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 1, 1941

Item	Value of improved land			
	Less than \$63	\$63 to \$77	\$78 to \$92	\$93 or more
Average value of improved land- - - - -	\$ 55	\$ 71	\$ 94	\$ 101
Number of farms - - - - -	16	19	22	28
Acres per farm - - - - -	183	171	187	183
Percent of land area tillable - - - - -	77.2	78.5	86.3	84.9
Percent of tillable land in:				
Corn- - - - -	29.9	32.1	31.3	36.2
Oats- - - - -	17.0	17.0	20.3	19.6
Wheat - - - - -	.5	1.5	1.0	1.6
Soybeans- - - - -	3.1	1.8	1.3	6.7
Other crops - - - - -	11.1	8.5	7.9	6.0
Legume hay and pasture- - - - -	24.5	22.1	22.9	19.1
Nonlegume hay and pasture - - - - -	13.9	17.0	15.3	10.8
Gross earnings per acre - - - - -	\$36.94	\$46.35	\$43.43	\$43.94
Gross expenses per acre - - - - -	<u>18.46</u>	<u>21.32</u>	<u>18.00</u>	<u>18.92</u>
Net earnings per acre - - - - -	\$18.48	\$25.03	\$25.43	\$25.02
Land tax per acre - - - - -	\$ 1.19	\$ 1.31	\$ 1.28	\$ 1.38

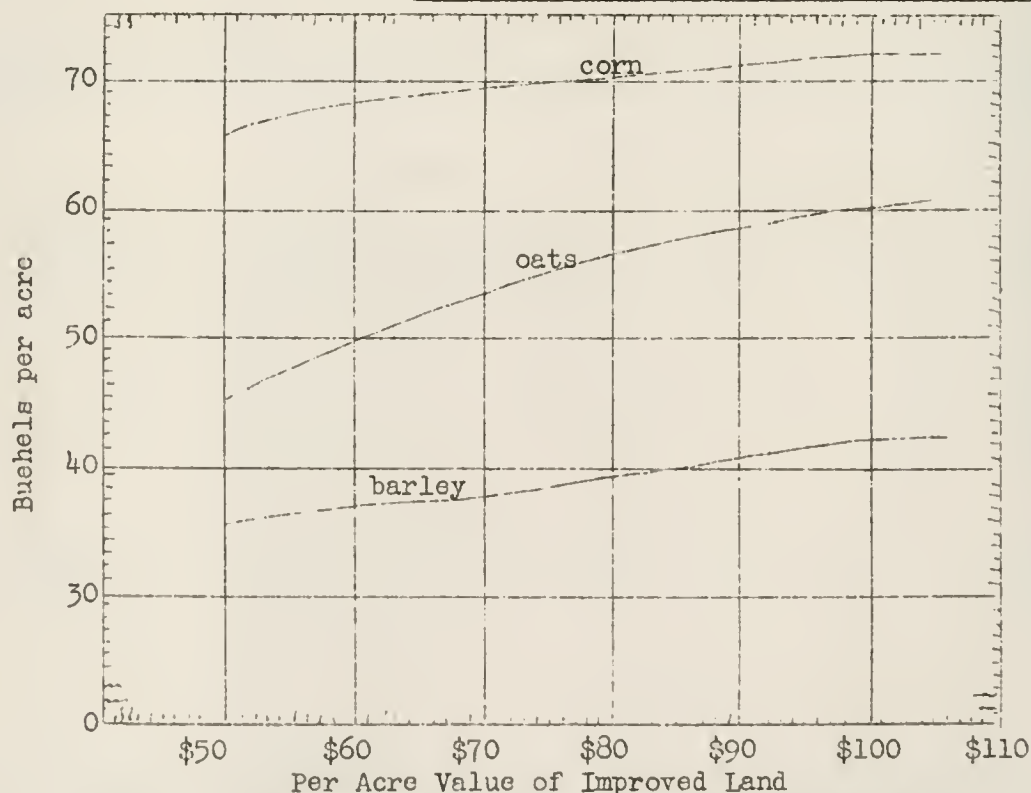


Fig. 1.--Average yields of corn, oats, and barley with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farms" (Table 2) are taken from Tables 3 to 6 and from Figure 1 as follows:

- Table 3 - Value of improved land.
 - Gross earnings, gross expenses, and net earnings per acre.
 - Value of improved land per acre.
 - All items in the land-use section.
 - Land tax per acre.
- Figure 1 - Value of improved land.
 - Yields for corn, oats, and barley.
- Table 4 - Source of income.
 - Feed fed per acre to productive livestock.
 - Returns per \$100 worth of feed fed.
 - Dairy returns per cow.
- Table 5 - Size of farm.
 - Value of improvements per acre.
 - Total months of labor.
 - Number of work horses.
 - Improvement cost per acre.
- Table 6 - Size of farm and number of milk cows per 100 acres.
 - Horse and machinery cost per crop acre.
 - Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops increased as the value per acre of improved land increased from an average of \$55 to \$101 while the percent of tillable land in hay and pasture decreased (Table 3). The percent of land area tillable, net earnings per acre, and land tax per acre were higher on the high valued land than on the low valued land.

Yields per acre for corn, oats, and barley increased as the land value increased (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 1, 1941

Item	Source of income			
	Dairy sales 40%+	Cattle 40%+	General farms	
			L.S. 60% -	L.S. 60% +
Number of farms - - - - -	56	9	7	13
Percent of income from prod. l.s. -	87.4	87.2	45.8	86.3
Percent of income from crops - - -	4.6	8.2	45.3	4.6
<u>Investments</u>				
Total per farm- - - - -	\$26 690	\$51 778	\$40 352	\$27 674
Total per acre- - - - -	164	198	166	161
Land per acre - - - - -	73	86	90	78
Improvements per acre - - - - -	40	38	30	37
Machinery per acre- - - - -	13.20	13.59	9.41	13.63
<u>Earnings</u>				
Per farm				
Gross earnings- - - - -	\$ 7 292	\$11 146	\$ 8 684	\$ 6 978
Gross expenses- - - - -	3 301	4 550	3 579	3 152
Net earnings- - - - -	\$ 3 991	\$ 6 596	\$ 5 105	\$ 3 826
Per acre				
Gross earnings- - - - -	\$ 44.70	\$ 42.62	\$ 35.80	\$ 40.67
Gross expenses- - - - -	20.24	17.40	14.75	18.37
Net earnings- - - - -	\$ 24.46	\$ 25.22	\$ 21.05	\$ 22.30
Rate earned on investment - - - -	15.0%	12.7%	12.7%	13.8%
Labor and management earnings - -	\$ 3 267	\$ 4 592	\$ 3 665	\$ 3 000
<u>Size and Intensity</u>				
Acres per farm- - - - -	163	262	243	172
Percent of land area tillable - -	80.1	90.6	86.7	80.0
Percent tillable land in grain- -	56.3	73.3	70.6	65.2
Percent in hay and pasture- - -	41.8	25.1	23.4	32.2
Feed fed per acre to prod. l.s. -	\$ 19.52	\$ 31.12	\$ 11.25	\$ 20.74
Months of labor per 100 crop A. -	24.1	11.3	12.9	17.2
Total months of labor - - - - -	25.3	24.2	24.5	20.8
<u>Crop Yields per Acre</u>				
Corn bu. - - - - -	70.1	72.7	71.9	69.0
Oats, bu.- - - - -	55.6	62.7	54.2	55.4
<u>Livestock Returns</u>				
Per \$100 feed fed- - - - -	\$ 206	\$ 122	\$ 145	\$ 177
Hog returns per litter- - - - -	164	184	167	157
Dairy returns per cow - - - - -	179	130	110	148
<u>Expense Factors</u>				
Labor cost per crop acre- - - - -	\$ 14.07	\$ 7.62	\$ 8.40	\$ 10.47
Horse and machinery cost				
per crop acre - - - - -	9.37	7.38	5.82	8.66
Improvement cost per acre - - - -	2.50	2.24	1.38	2.20
Land tax per acre - - - - -	1.26	1.37	1.24	1.45

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer, however, should use caution in interpreting the data in Table 4. For example, the fact that ^{dairy} ~~cattle~~ farms showed a larger rate earned on the investment for 1941 than farms with other major sources of income does not mean that such a relationship will prevail over a long period of years. The relative profitableness of these enterprises in 1941 was due largely to conditions affecting price and production.

When comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Differences in expenses are highly significant for the four groups of farms. Labor input per 100 crop acres was highest on the dairy farms, where 24.1 months of labor were used, and lowest on the cattle farms, where 11.3 months of labor were used. The dairy farmers evidently utilized a large amount of available labor to increase the size of their businesses without increasing the size of their farms.

The labor cost per crop acre ranged from \$7.62 on the cattle farms to \$14.07 on the dairy farms, and the horse and machinery cost per crop acre was also highest on the dairy farms, where it averaged \$9.37 and lowest on the general farms having the least amount of livestock where it averaged \$5.82.

Size of farm. When the farm records in Farming-Type Area 1 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 33 largest farms had labor and management earnings which averaged \$4,308 contrasted with \$2,355 for the 21 smallest farms. The smaller farms had higher investments per acre for land, machinery, and total investment, indicating a higher capital input. The rate earned on investment, although somewhat larger on the small farms, did not differ significantly for the different size groups.

The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the higher gross and net earnings per acre, by a larger value of feed fed per acre to productive livestock, and by a larger labor input per 100 crop acres.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 1, 1941

Item	Total acres in farm		
	Less than 131	131 to 190	191 or more
Number of farms - - - - -	21	31	33
Acres per farm- - - - -	103	161	251
<u>Investments</u>			
Total per farm- - - - -	\$18 166	\$27 047	\$41 906
Total per acre- - - - -	176	168	167
Land per acre - - - - -	83	77	77
Improvements per acre - - - - -	38	41	36
Machinery per acre- - - - -	16.11	13.43	11.75
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$ 4 954	\$ 7 139	\$10 137
Gross expenses- - - - -	2 316	3 252	4 306
Net earnings - - - - -	\$ 2 638	\$ 3 887	\$ 5 831
Per acre			
Gross earnings- - - - -	\$ 48.00	\$ 44.41	\$ 40.47
Gross expenses- - - - -	22.44	20.23	17.19
Net earnings- - - - -	\$ 25.56	\$ 24.18	\$ 23.28
Rate earned on investment - - - - -	14.5%	14.4%	13.9%
Labor and management earnings - - - - -	\$ 2 355	\$ 3 140	\$ 4 308
<u>Size and Intensity</u>			
Percent of land area tillable - - - - -	82.6	82.3	82.5
Percent tillable land in grain- - - - -	59.7	57.1	65.7
Percent in hay and pasture - - - - -	38.6	40.8	31.5
Feed fed per acre to productive livestock - - - - -	\$ 22.10	\$ 19.17	\$ 20.99
Percent of income from productive livestock - - - - -	88.3	85.0	80.5
Percent of income from crops- - - - -	1.3	6.1	13.1
Months of labor per 100 crop acres- - - - -	26.4	22.9	15.6
Total months of labor - - - - -	18.9	24.6	27.9
Number of work horses - - - - -	2.6	3.2	3.7
<u>Crop Yields per Acre</u>			
Corn, bu. - - - - -	67.0	72.3	70.8
Oats, bu. - - - - -	50.7	59.3	56.6
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 200	\$ 204	\$ 159
Hog returns per litter- - - - -	151	173	165
Dairy returns per cow - - - - -	171	183	164
<u>Expense Factors</u>			
Labor cost per crop acre- - - - -	\$14.34	\$12.90	\$10.30
Horse and machinery cost per crop acre- - - - -	10.17	9.92	7.21
Improvement cost per acre - - - - -	2.29	2.49	2.17
Land tax per acre - - - - -	1.62	1.23	1.26

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases but decrease as the size of farm increases. Therefore, the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and the number of milk cows per 100 acres (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND NUMBER OF MILK COWS PER 100 ACRES
Accounting Farms in Farming-Type Area 1, 1941

Acres per farm	Milk cows per 100 acres			Milk cows per 100 acres		
	Less than 11	11 to 15.9	16 or more	Less than 11	11 to 15.9	16 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 131	\$12.00	\$14.40	\$17.10	\$8.10	\$10.10	\$11.60
131 to 190	10.80	12.90	15.10	7.50	9.30	11.30
191 or more	8.30	11.00	13.00	6.50	7.60	10.00

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grain are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 1, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	85	81	87	78
<u>Capital Investments</u>					
Land- - - - -	\$	\$14 073	\$14 034	\$13 252	\$15 365
Farm improvements - - - - -		6 897	6 350	5 873	5 686
Horses- - - - -		337	394	391	498
Productive livestock: Cattle- - -		3 893	3 428	2 601	2 704
Hogs- - -		432	379	274	270
Sheep - - -		73	41	24	105
Poultry - -		121	131	119	127
Total productive livestock- - -	()	(4 519)	(3 979)	(3 018)	(3 206)
Feed and grain- - - - -		2 454	2 260	1 830	1 915
Machinery and equipment - - - -		2 170	2 085	1 929	1 728
Automobile (farm share) - - - -		171	156	129	126
Total - - - - -	\$	\$30 621	\$29 258	\$26 422	\$28 524
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle- - -		1 499	1 200	730	581
Dairy sales		3 285	2 586	2 130	2 483
Hogs- - -		1 278	668	430	528
Sheep - - -		58	26	42	22
Poultry - -		71	60	60	48
Egg sales -		271	205	195	212
Total productive livestock- - -	()	(6 462)	(4 745)	(3 587)	(3 874)
Farm products used in household -		279	253	241	267
Feed and grain- - - - -		693	207	271	190
Labor off farm- - - - -		30	62	38	30
Miscellaneous - - - - -		23	7	9	5
AAA payments - - - - -		275	282	311	137
Total - - - - -	\$	\$ 7 762	\$ 5 556	\$ 4 457	\$ 4 503
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 416	\$ 326	\$ 291	\$ 292
Horses- - - - -		15	27	14	22
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - -		788	587	489	520
Automobile (farm share) - - - -		107	94	79	74
Hired labor - - - - -		706	523	490	502
Miscellaneous - - - - -		34	28	34	25
Crop expense - - - - -		203	190	178	202
Livestock expense - - - - -		103	79	80	80
Taxes - - - - -		270	276	244	252
Total - - - - -	\$	\$ 2 642	\$ 2 130	\$ 1 899	\$ 1 969
Receipts less expenses- - - - -	\$	\$ 5 120	\$ 3 426	\$ 2 558	\$ 2 534
Family labor- - - - -		189	199	224	239
Returns for labor, capital, mgt. \$		\$ 4 931	\$ 3 227	\$ 2 334	\$ 2 295
Operator's labor- - - - -		598	544	516	519
Net earnings per farm - - - - -	\$	\$ 4 333	\$ 2 683	\$ 1 813	\$ 1 776
Rate Earned on Investment - - - -	%	14.2%	9.2%	6.9%	6.2%
Interest on investment- - - - -	\$	\$ 1 531	\$ 1 463	\$ 1 321	\$ 1 426
Labor and Management Earnings - -		3 400	1 764	1 013	869
Nonfarm income- - - - -	\$	\$ 41	\$ 47	\$ 75	\$ 74

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA TWO Northwestern Mixed Livestock Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON FIVE HUNDRED SIXTEEN FARMS IN FARMING-TYPE AREA 2, 1941

By P. E. Johnston, J. B. Cunningham, and W. D. Buddemeier^{1/}

Farm earnings of accounting farms in Farming-Type Area 2 were much higher in 1941 than in 1940. The average net earnings per acre were \$24.35 in 1941, \$13.51 in 1940, \$12.65 in 1939, and \$9.62 in 1938. The items considered in calculating the net earnings included: inventory changes; cash receipts; cash expenses; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940.



 Farming-Type Area 2
Mixed Livestock

Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, especially for feed and machinery, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all the farms in the area; the crop yields were above average; and the farm operators were more skillful than average in the organization and operation of their farms. Therefore, the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his business operations in order to

locate the strong and weak places in the management of his farm. The data in Tables 1 to 7 and Figure 1 are particularly well adapted for such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.

^{1/} W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

D. G. McAllister, DeKalb County
V. J. Banter, Stephenson County
C. E. Yale, Lee County
D. E. Warren, Ogle County
R. C. Smith, Rock Island County

H. E. Kearnaghan, Jo Daviess County
F. H. Shuman, Whiteside County
M. P. Roske, Carroll County
H. R. Brunnemeyer, Winnebago County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 2, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	516	456	454	382
Acres per farm - - - - -		208	212	209	206
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 95	\$ 74	\$ 104	\$ 100
Livestock- - - - -		1 043	518	483	130
Feed and grain - - - - -		882	112	521	112
Machinery and equipment- - - - -		210	63	86	112
Automobile (farm share)- - - - -		44	4	-3	-6
Total - - - - -	\$	\$ 2 274	\$ 771	\$ 1 191	\$ 448
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 9	\$ 13	\$ 32	\$ 6
Horses - - - - -		25	29	44	37
Productive livestock: Cattle - - - - -		3 493	3 464	2 656	1 912
Dairy sales- - - - -		1 202	822	669	784
Hogs - - - - -		2 377	1 459	1 392	1 629
Sheep- - - - -		216	195	205	136
Poultry- - - - -		124	93	87	74
Egg sales- - - - -		255	171	151	170
Total productive livestock - - - - -	()	(7 667)	(6 204)	(5 160)	(4 705)
Feed and grain - - - - -		901	927	842	556
Machinery and equipment- - - - -		214	199	188	192
Automobile (farm share)- - - - -		60	39	32	23
Labor off farm - - - - -		31	38	38	43
Miscellaneous- - - - -		12	9	11	6
AAA payments - - - - -		391	399	576	164
Total- - - - -	\$	\$ 9 310	\$ 7 857	\$ 6 923	\$ 5 732
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 476	\$ 390	\$ 426	\$ 357
Horses - - - - -		21	22	28	32
Productive livestock: Cattle - - - - -		1 815	1 938	1 740	941
Hogs - - - - -		123	96	119	116
Sheep- - - - -		130	107	137	77
Poultry- - - - -		39	31	32	26
Total productive livestock - - - - -	()	(2 107)	(2 172)	(2 028)	(1 160)
Feed and grain - - - - -		1 117	827	695	514
Machinery and equipment- - - - -		1 059	798	778	746
Automobile (farm share)- - - - -		222	146	130	112
Hired labor- - - - -		417	367	362	312
Miscellaneous- - - - -		39	35	33	31
Crop expense - - - - -		163	180	175	174
Livestock expense- - - - -		78	63	66	61
Taxes- - - - -		281	277	266	237
Total- - - - -	\$	\$ 5 980	\$ 5 277	\$ 4 987	\$ 3 736
<u>Summary</u>					
Cash balance - - - - -	\$	\$ 3 330	\$ 2 580	\$ 1 936	\$ 1 996
Farm products used in household- - - - -		276	247	250	265
Total inventory change - - - - -		2 274	771	1 191	448
Receipts less expenses - - - - -	\$	\$ 5 880	\$ 3 598	\$ 3 377	\$ 2 709
Total unpaid labor - - - - -		810	736	732	724
Net earnings per farm- - - - -	\$	\$ 5 070	\$ 2 862	\$ 2 645	\$ 1 985
Net earnings per acre- - - - -	\$	\$ 24.35	\$ 13.51	\$ 12.65	\$ 9.62

Inventory changes. The year 1941 was the ninth consecutive year of increasing inventories. The increases during the past four years ranged from \$2,274 in 1941 to \$448 in 1940 (Table 1). The largest increases in 1941 were for live-stock and feed and grain. The average amounts of grain on hand in Area 2 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	2 511	2 840
Oats	1 163	1 069
Wheat	36	22
Soybeans	73	82

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$3,330, a larger margin than for any other year during the past four. The cash balance, the difference between cash receipts and expenses, is the amount of money available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$55 per month in 1941 and at \$50 per month in each of the three previous years.

The net earnings per farm averaged \$5,070 in 1941 compared with \$2,862 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 2. For example, 79 farms earned less than ten percent on their investment, with an average rate earned of 7.9 percent; but 54 farms earned twenty-two percent or more, with an average rate earned of 24.7 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$1,555 for labor and management earnings contrasted with \$5,733 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 10.00	79	7.9	215	\$33 414	\$6 209	\$2 644	\$1 555
10.00 to 13.99	135	12.0	229	39 040	8 247	4 684	3 347
14.00 to 17.99	132	16.0	205	34 181	8 812	5 461	4 371
18.00 to 21.99	116	19.8	195	30 876	9 362	6 111	5 191
22.00 or more	54	24.7	183	25 834	9 168	6 393	5 733

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 2, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	<u> </u> ^d	15.0%	15.0%
Number of farms- - - - -	--	--	516
Acres in farm- - - - -	<u> </u>	208	208
Acres tillable - - - - -	<u> </u>	171	171
Acres in crops - - - - -	<u> </u>	135	135
Gross earnings per acre- - - - -	\$ <u> </u>	\$ <u> </u> ^{a/}	\$38.44
Total expenses per acre- - - - -	<u> </u>	<u> </u>	14.09
Net earnings per acre- - - - -	\$ <u> </u>	\$ <u> </u>	\$24.35
<u>Investments</u>			
Value of land per acre - - - - -	\$ <u> </u>	\$ 89	\$ 89
Value of improved land per acre- - - - -	<u> </u>	<u> </u> ^{a/}	95
Value of improvements per acre - - - - -	<u> </u>	<u> </u> ^{e/}	29
Total investment per acre- - - - -	<u> </u>	162	162
<u>Land Use</u>			
Percent of land area tillable- - - - -	<u> </u>	<u> </u> ^{a/}	82.3
Percent of tillable land in:			
Corn - - - - -	<u> </u>	<u> </u>	31.8
Oats - - - - -	<u> </u>	<u> </u>	20.9
Wheat- - - - -	<u> </u>	<u> </u>	1.2
Soybeans - - - - -	<u> </u>	<u> </u>	3.4
Other crops- - - - -	<u> </u>	<u> </u>	6.1
Legume hay and pasture - - - - -	<u> </u>	<u> </u>	24.0
Nonlegume hay and pasture- - - - -	<u> </u>	<u> </u>	12.6
<u>Crop Yields</u>			
Corn - - - - -	<u> </u>	<u> </u> ^{b/}	71.2
Oats - - - - -	<u> </u>	<u> </u>	49.6
Wheat- - - - -	<u> </u>	20.5	20.5
Soybeans - - - - -	<u> </u>	22.9	22.9
<u>Livestock Factors</u>			
Value of feed fed to productive l.s. - -	\$ <u> </u>	\$ 3 893	\$ 3 893
Feed fed per acre to productive l.s. - -	<u> </u>	<u> </u> ^{c/}	18.70
Returns per \$100 worth of feed fed - - -	<u> </u>	<u> </u>	175
Poultry returns per hen- - - - -	<u> </u>	3.60	3.60
Number of litters farrowed - - - - -	<u> </u>	19.6	19.6
Number of pigs weaned per litter - - - -	<u> </u>	6.4	6.4
Returns per litter farrowed- - - - -	\$ <u> </u>	\$ 157	\$ 157
Average number of cows milked- - - - -	<u> </u>	10.2	10.2
Dairy returns per cow milked - - - - -	\$ <u> </u>	\$ <u> </u> ^{c/}	\$ 126
<u>Expense Factors</u>			
Horse and machinery cost per crop acre -	\$ <u> </u>	\$ <u> </u> ^{d/}	\$ 6.58
Labor cost per crop acre - - - - -	<u> </u>	<u> </u>	8.83
Total months of labor- - - - -	<u> </u>	<u> </u> ^{c/}	21.3
Number of work horses- - - - -	<u> </u>	<u> </u>	2.8
Improvement cost per acre- - - - -	\$ <u> </u>	\$ <u> </u>	\$ 1.79
Land tax per acre- - - - -	<u> </u>	<u> </u> ^{a/}	1.18

Source of Standards:

a/ Table 3, value of improved land.

b/ Fig. 1, value of improved land.

c/ Table 4, source of income.

d/ Table 6, size of farm and value of feed fed.

e/ Table 5, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 2, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings							Gross expense per acre	Factors that affect expenses			
			Percent of tillable land in legume hay and pasture	Crop yields	Corn, bu.	Oats, bu.	Feed fed per acre to productive l.s.	Returns per \$100 feed fed	Poultry returns per hen		Hog returns per litter farrowed	Dairy returns per cow milked	Horse and machinery cost per crop acre	Labor cost per crop acre
5.0	458							6.10	232					
3.0	408							5.60	217					
1.0	358							5.10	202					
9.0	308							4.60	187					
7.0	258							4.10	172					
5.0	208							3.60	157					
3.0	158							3.10	142					
1.0	108							2.60	127					
9.0	58							2.10	112					
7.0	--							1.60	97					
5.0	--							1.10	82					
2%	50	\$4	2%	5	5	\$4	\$15	\$5.00	\$15	\$10	\$2	\$.50	\$1	\$.30

Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 2, 1941

Item	Value of improved land					
	Less than \$53	\$53 to \$72	\$73 to \$92	\$93 to \$112	\$112 to \$132	\$133 or more
Average value of improved land-	\$ 44	\$ 64	\$ 81	\$ 103	\$ 123	\$ 142
Number of farms - - - - -	55	103	119	85	92	62
Acres per farm- - - - -	216	197	202	198	232	211
Percent of land area tillable -	68.7	75.6	80.1	86.7	89.3	91.9
Percent of tillable land in:						
Corn- - - - -	26.8	27.5	31.5	32.3	35.1	34.9
Oats- - - - -	18.7	20.6	20.1	21.0	22.9	21.6
Wheat - - - - -	1.0	.9	1.6	1.6	.9	1.0
Soybeans- - - - -	2.1	1.8	2.6	2.4	6.0	4.8
Other crops - - - - -	8.4	4.3	5.5	6.8	6.0	6.6
Legume hay and pasture- - - -	25.1	29.3	25.4	23.3	19.7	22.1
Nonlegume hay and pasture - -	17.9	15.6	13.3	12.6	9.4	9.0
Gross earnings per acre - - - -	\$26.55	\$33.94	\$36.93	\$39.60	\$43.11	\$49.78
Gross expenses per acre - - - -	<u>11.42</u>	<u>13.92</u>	<u>13.78</u>	<u>14.49</u>	<u>14.55</u>	<u>15.97</u>
Net earnings per acre - - - - -	\$15.13	\$20.02	\$23.15	\$25.11	\$28.56	\$33.81
Land tax per acre - - - - -	\$.89	\$ 1.01	\$ 1.13	\$ 1.35	\$ 1.30	\$ 1.40

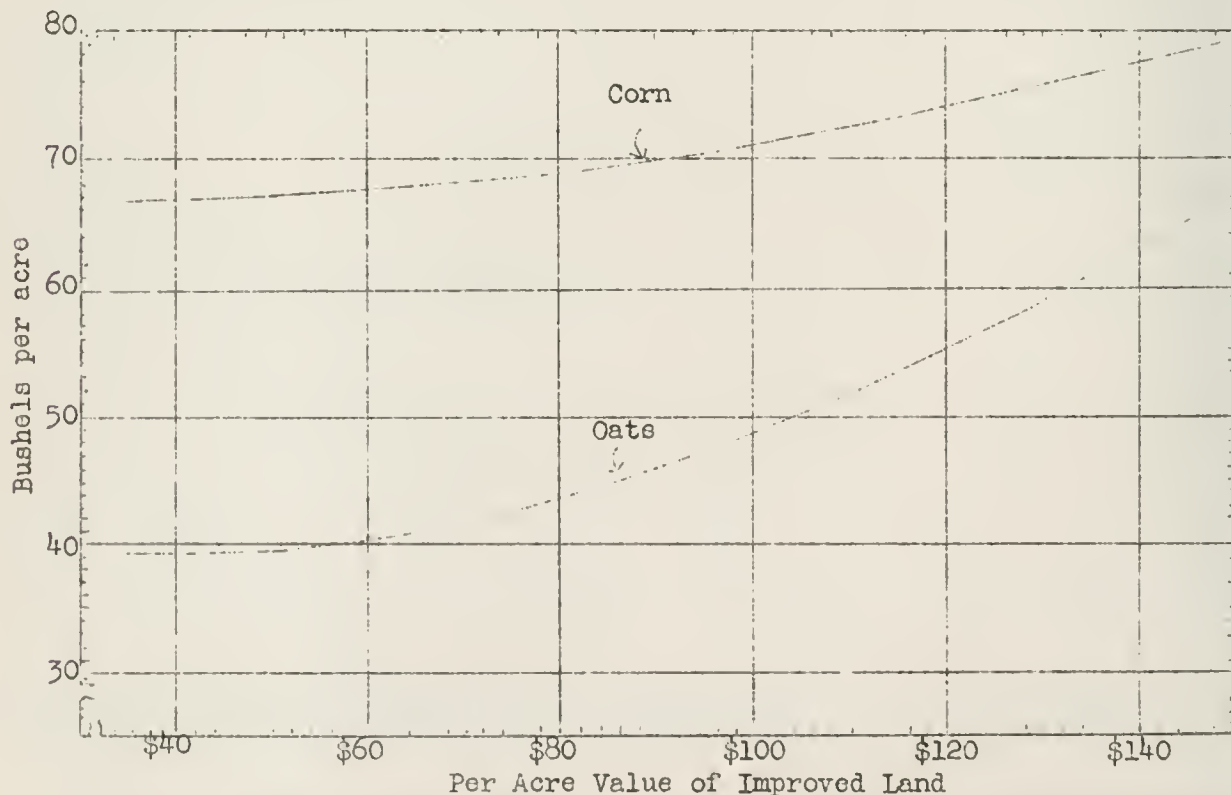


Fig. 1.--Average yields of corn and oats with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farms" (Table 2) are taken from Tables 3 to 6 and from Figure 1 as follows:

- Table 3 - Value of improved land.
 - Gross earnings, gross expenses, and net earnings per acre.
 - Value of improved land per acre.
 - All items in the land-use section.
 - Land tax per acre.
- Figure 1 - Value of improved land.
 - Yields for corn and oats.
- Table 4 - Source of income.
 - Feed fed per acre to productive livestock.
 - Returns per \$100 worth of feed fed.
 - Dairy returns per cow.
- Table 5 - Size of farm.
 - Value of improvements per acre.
 - Total months of labor.
 - Number of work horses.
 - Improvement cost per acre.
- Table 6 - Size of farm and amount of feed fed per acre.
 - Horse and machinery cost per crop acre.
 - Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops increased as the per acre value of improved land increased while the percent of tillable land in hay and pasture decreased (Table 3). Likewise the percent of land area tillable and the net earnings per acre increased as the value of improved land increased, and the land tax per acre was higher on the high valued land than on the low valued land.

Yields per acre for corn and oats increased as the land value increased (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-type Area 2, 1941

Item	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%+	L.S. 60%+
Number of farms - - - - -	33	39	167	74	26	177
Percent of income from prod. l.s.	36.2	91.6	91.5	92.5	54.8	78.4
Percent of income from crops - - -	55.8	--	--	--	33.6	12.1
<u>Investments</u>						
Total per farm- - - - -	\$41 649	\$25 696	\$29 492	\$46 831	\$36 994	\$32 046
Total per acre- - - - -	163	143	158	193	170	152
Land per acre - - - - -	104	68	85	100	107	84
Improvements per acre - - - - -	22	32	29	32	25	27
Machinery per acre- - - - -	10.31	11.22	11.32	12.38	11.35	10.45
<u>Earnings</u>						
Per farm						
Gross earnings - - - - -	\$ 8 742	\$ 6 538	\$ 7 710	\$10 655	\$ 7 808	\$ 7 661
Gross expenses - - - - -	2 910	2 841	2 715	4 317	2 768	2 885
Net earnings- - - - -	\$ 5 832	\$ 3 697	\$ 4 995	\$ 6 338	\$ 5 040	\$ 4 776
Per acre						
Gross earnings- - - - -	\$ 34.13	\$ 36.41	\$ 41.37	\$ 44.01	\$ 35.95	\$ 36.39
Gross expenses- - - - -	11.36	15.82	14.57	17.83	12.75	13.70
Net earnings- - - - -	\$ 22.77	\$ 20.59	\$ 26.80	\$ 26.18	\$ 23.20	\$ 22.69
Rate earned on investment - - -	14.0%	14.4%	16.9%	13.5%	13.6%	14.9%
Labor and management earnings -	\$ 4 352	\$ 3 018	\$ 4 137	\$ 4 580	\$ 3 780	\$ 3 808
<u>Size and Intensity</u>						
Acres per farm- - - - -	256	180	186	242	217	211
Percent of land area tillable -	87.3	73.9	83.0	84.4	87.5	80.3
Percent tillable land in grain-	67.3	51.7	58.2	62.4	61.5	57.5
Percent in hay and pasture- - -	27.2	45.3	38.3	33.9	33.8	37.8
Feed fed per acre to prod. l.s.	\$ 8.00	\$ 17.45	\$ 21.08	\$ 28.32	\$ 11.38	\$ 15.87
Months of labor per 100 crop A.	10.0	22.1	16.8	14.3	13.0	16.5
Total months of labor - - - - -	19.0	22.4	20.0	23.8	19.4	22.0
<u>Crop Yields per Acre</u>						
Corn, bu. - - - - -	70.9	72.0	70.5	77.1	66.7	69.5
Oats, bu. - - - - -	52.7	45.6	47.4	53.6	53.7	48.5
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 163	\$ 197	\$ 185	\$ 147	\$ 181	\$ 186
Hog returns per litter- - - - -	144	133	166	166	146	148
Dairy returns per cow - - - - -	96	153	118	117	120	128
<u>Expense Factors</u>						
Labor cost per crop acre- - - -	\$ 5.52	\$ 12.16	\$ 9.31	\$ 8.53	\$ 6.96	\$ 9.22
Horse and machinery cost						
per crop acre - - - - -	4.91	8.30	6.94	6.98	5.91	6.33
Improvement cost per acre - - -	1.45	2.25	1.77	2.02	1.48	1.71
Land tax per acre - - - - -	1.20	1.10	1.19	1.19	1.27	1.18

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer, however, should use caution in interpreting the data in Table 4. For example, the fact that hog farms showed the largest rate earned on the investment for 1941 and that cattle farms showed the smallest does not mean that such a relationship will prevail over a long period of years. The relative profitableness of these enterprises in 1941 was due largely to conditions affecting price and production.

When comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, when comparing crop yields for the various types of farming, one should note the following items which indicate that the grain farms were located on the better land: (1) high value of land per acre; (2) large percent of land area tillable; (3) large percent of land in grain; and (4) high land tax per acre.

Differences in expenses, on the other hand, are highly significant for the six groups of farms. Labor input per 100 crop acres was highest on the dairy farms, where 22.1 months of labor were used, and lowest on the grain farms, where 10.0 months of labor were used. The dairy farmers evidently utilized a large amount of available labor to increase the size of their businesses without increasing the size of their farms.

The labor cost per crop acre ranged from \$12.16 on the dairy farms to \$5.52 on the grain farms; the horse and machinery cost per crop acre was highest on the dairy farms, where it averaged \$8.30 and lowest on the grain farms, where it averaged \$4.91; the improvement cost per acre averaged \$2.25 on the dairy farms and \$1.45 on the grain farms.

Size of farm. When the farm records in Farming-Type Area 2 are sorted according to the total acres in the farm, they indicate that the largest farms had a greater total investment in land, improvements, and equipment than did the smallest ones. The operators on the largest farms took in more money during the year than did those on the smallest ones; and, after deductions were made for farm business expenditures and interest on the investment, the 16 largest farms had labor and management earnings which averaged \$7,082 contrasted with \$2,501 for the 93 smallest farms. The rate earned on investment was largest for the two size groups under 200 acres in size.

The smallest farms were operated more intensively than were the larger ones. This variation was indicated by the much higher gross earnings per acre and by the larger labor and capital input per acre and the larger value of feed fed per acre to productive livestock.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1941

Item	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	93	221	110	50	26	16
Acres per farm- - - - -	104	166	238	319	395	534
<u>Investments</u>						
Total per farm- - - - -	\$17 504	\$27 637	\$39 173	\$51 891	\$57 552	\$79 108
Total per acre- - - - -	169	166	164	163	146	148
Land per acre - - - - -	84	89	90	91	84	88
Improvements per acre-- - - -	35	29	29	27	25	22
Machinery per acre- - - - -	14.63	11.92	11.48	9.73	8.29	8.49
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 4 645	\$ 6 902	\$ 9 138	\$11 201	\$13 203	\$16 456
Gross expenses- - - - -	1 878	2 536	3 220	4 092	4 718	6 019
Net earnings- - - - -	\$ 2 767	\$ 4 366	\$ 5 918	\$ 7 109	\$ 8 485	\$10 437
Per acre						
Gross earnings- - - - -	\$ 44.75	\$ 41.50	\$ 38.33	\$ 35.11	\$ 33.42	\$ 30.79
Gross expenses- - - - -	18.09	15.25	13.51	12.83	11.94	11.26
Net earnings- - - - -	\$ 26.66	\$ 26.25	\$ 24.82	\$ 22.28	\$ 21.48	\$ 19.53
Rate earned on investment - - -	15.8%	15.8%	15.1%	13.7%	14.7%	13.2%
Labor and management earnings - -	\$ 2 501	\$ 3 603	\$ 4 588	\$ 5 109	\$ 6 195	\$ 7 082
<u>Size and Intensity</u>						
Percent of land area tillable - -	85.4	84.6	82.2	79.3	77.2	80.6
Percent tillable land in grain- -	55.2	57.5	60.9	61.3	61.7	59.8
Percent in hay and pasture- - -	42.8	38.9	35.2	33.9	33.0	32.3
Feed fed per acre to prod. l.s. -	\$ 20.86	\$ 20.68	\$ 17.83	\$ 18.96	\$ 14.05	\$ 15.54
Percent of income from prod. l.s. -	88.3	87.0	79.1	84.5	71.3	75.4
Percent of income from crops- - -	2.0	3.6	12.9	7.4	19.5	15.7
Months of labor per 100 crop A. -	22.9	17.9	14.4	13.5	12.1	10.6
Total months of labor - - - - -	15.4	19.7	22.4	27.5	30.1	36.4
Number of work horses - - - - -	2.3	2.7	2.9	3.1	3.7	4.3
<u>Crop Yields per Acre</u>						
Corn, bu. - - - - -	72.3	72.3	72.1	69.7	69.9	67.2
Oats, bu. - - - - -	47.3	49.2	52.0	51.6	45.5	45.7
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 197	\$ 180	\$ 175	\$ 160	\$ 174	\$ 153
Hog returns per litter- - - - -	143	160	159	155	159	172
Dairy returns per cow - - - - -	122	128	126	122	137	139
<u>Expense Factors</u>						
Labor cost per crop acre - - - -	\$ 12.42	\$ 9.85	\$ 8.17	\$ 7.70	\$ 7.08	\$ 6.48
Horse and machinery cost per crop acre - - - - -	8.39	6.79	6.33	6.40	5.72	5.69
Improvement cost per acre - - - -	2.06	1.87	1.75	1.68	1.60	1.63
Land tax per acre - - - - -	1.24	1.26	1.18	1.13	1.13	.99

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases but decrease as the size of farm increases. Therefore, the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 2, 1941

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than \$10.00	\$10.00 to \$16.99	\$17.00 to \$23.99	\$24.00 or more	Less than \$10.00	\$10.00 to \$16.99	\$17.00 to \$23.99	\$24.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	\$10.30	\$12.50	\$12.92	\$13.00	\$ 7.02	\$7.50	\$8.08	\$8.86
121 to 200	9.71	9.81	10.00	10.40	5.94	6.92	7.00	7.22
201 to 280	7.76	8.27	8.40	8.64	5.60	5.85	6.57	7.00
281 to 360	7.01	7.91	8.00	8.18	5.40	5.50	5.80	6.54
361 to 440	6.91	6.95	7.17	8.04	5.15	5.30	5.65	5.90
441 or more	5.95	6.50	6.70	7.00	5.00	5.15	5.50	5.70

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grain are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS

Accounting Farms in Farming-Type Area 2, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	516	456	454	382
<u>Capital Investments</u>					
Land- - - - -	\$	\$18 461	\$19 572	\$19 274	\$17 251
Farm improvements - - - - -		5 939	5 829	5 673	5 295
Horses- - - - -		288	334	380	402
Productive livestock: Cattle- - -		3 091	2 847	2 295	2 045
Hogs- - -		781	721	825	787
Sheep - - -		162	150	121	98
Poultry - -		107	100	107	110
Total productive livestock- - -	()	(4 141)	(3 818)	(3 348)	(3 040)
Feed and grain- - - - -		2 583	2 738	2 295	2 079
Machinery and equipment - - - -		2 103	2 099	2 033	1 870
Automobile (farm share) - - - -		209	185	186	184
Total - - - - -	\$	\$33 724	\$34 575	\$33 189	\$30 121
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle- - -		2 144	1 993	1 485	1 082
Dairy sales		1 202	822	669	784
Hogs- - -		2 802	1 444	1 202	1 545
Sheep - - -		108	86	85	62
Poultry - -		116	68	56	49
Egg sales -		255	171	151	170
Total productive livestock- - -	()	(6 627)	(4 584)	(3 648)	(3 692)
Farm products used in household -		276	247	250	265
Feed and grain- - - - -		666	212	668	154
Labor off farm- - - - -		31	38	38	43
Miscellaneous - - - - -		12	9	11	6
AAA payments- - - - -		391	399	576	164
Total - - - - -	\$	\$ 8 003	\$ 5 489	\$ 5 191	\$ 4 324
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 372	\$ 303	\$ 290	\$ 251
Horses- - - - -		20	27	17	12
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - -		635	536	504	442
Automobile (farm share) - - - -		118	103	101	95
Hired labor - - - - -		417	367	362	312
Miscellaneous - - - - -		39	35	33	31
Crop expense- - - - -		163	180	175	174
Livestock expense - - - - -		78	63	66	61
Taxes - - - - -		281	277	266	237
Total - - - - -	\$	\$ 2 123	\$ 1 891	\$ 1 814	\$ 1 615
Receipts less expenses- - - - -	\$	\$ 5 880	\$ 3 598	\$ 3 377	\$ 2 709
Family labor- - - - -		195	176	178	172
Returns for labor, capital, mgt. -	\$	\$ 5 685	\$ 3 422	\$ 3 199	\$ 2 537
Operator's labor- - - - -		615	560	554	552
Net earnings per farm - - - - -	\$	\$ 5 070	\$ 2 862	\$ 2 645	\$ 1 985
Rate Earned on Investment - - - -	%	15.0%	8.3%	8.0%	6.6%
Interest on investment- - - - -	\$	\$ 1 686	\$ 1 729	\$ 1 660	\$ 1 505
Labor and Management Earnings - -		3 999	1 693	1 539	1 032
Nonfarm income- - - - -	\$	\$ 85	\$ 55	\$ 73	\$ 74

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA THREE Western Livestock and Grain Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON FIVE HUNDRED NINETY-FOUR FARMS IN FARMING-TYPE AREA 3, 1941

By P. E. Johnston, J. B. Cunningham, and L. F. Stice^{1/}

Farm earnings of accounting farms in Farming-Type Area 3 were much higher in 1941 than in 1940. The average net earnings per acre were \$24.91 in 1941, \$11.67 in 1940, \$14.06 in 1939, and \$10.36 in 1938. The items considered in calculating the net earnings included: inventory changes; cash receipts; cash expenses; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940 (Table 1).



 Farming-Type Area 3
Livestock and Grain

Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, especially for feed and machinery, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all the farms in the area; the crop yields were above average; and the farm operators were more skillful than average in the organization and operation of their farms. Therefore, the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his business operations in order to locate the strong and weak places in the management of his farm. The data in Tables 1 to 7 and Figure 1 are particularly well adapted for such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.

^{1/} W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

H. K. Danforth, Henry County
R. G. Benbow, McDonough County
A. R. Kemp, Knox County
Paul V. Dean, Bureau County
J. E. Watt, Fulton County
L. J. Hager, Marshall-Putnam Counties

I. F. Green, Peoria County
Wayne A. Gilbert, Stark County
L. L. Norton, Hancock County
E. H. Walworth, Warren County
A. J. Rehling, Henderson County
E. M. Edwards, Mercer County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 3, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	594	536	511	500
Acres per farm - - - - -		241	249	249	247
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 51	\$ 88	\$ 187	\$ 127
Livestock- - - - -		1 338	596	249	274
Feed and grain - - - - -		1 023	-82	960	22
Machinery and equipment- - - - -		257	59	122	160
Automobile (farm share)- - - - -		29	-1	22	-2
Total - - - - -	\$	\$2 698	\$ 660	\$1 540	\$ 581
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 5	\$ 18	\$ 10	\$ 15
Horses - - - - -		32	36	55	54
Productive livestock: Cattle - - - - -		2 806	2 643	2 433	1 817
Dairy sales- - - - -		475	365	313	342
Hogs - - - - -		3 485	2 020	2 144	2 561
Sheep- - - - -		266	264	257	283
Poultry- - - - -		121	94	84	96
Egg sales- - - - -		173	115	109	116
Total productive livestock - - - - -	()	(7 326)	(5 501)	(5 340)	(5 215)
Feed and grain - - - - -		1 853	1 600	1 378	1 240
Machinery and equipment- - - - -		292	244	253	266
Automobile (farm share)- - - - -		63	51	55	35
Labor off farm - - - - -		40	58	44	58
Miscellaneous- - - - -		22	18	17	10
AAA payments - - - - -		518	546	782	193
Total- - - - -	\$	\$10 151	\$8 072	\$7 934	\$7 086
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 417	\$ 429	\$ 479	\$ 389
Horses - - - - -		18	24	36	36
Productive livestock: Cattle - - - - -		1 348	1 404	1 369	955
Hogs - - - - -		190	138	146	142
Sheep- - - - -		236	172	174	179
Poultry- - - - -		30	23	24	24
Total productive livestock - - - - -	()	(1 804)	(1 737)	(1 713)	(1 300)
Feed and grain - - - - -		1 495	986	1 036	755
Machinery and equipment- - - - -		1 281	956	990	994
Automobile (farm share)- - - - -		221	167	179	139
Hired labor- - - - -		515	466	510	474
Miscellaneous- - - - -		42	40	41	40
Crop expense - - - - -		159	174	170	184
Livestock expense- - - - -		84	71	77	77
Taxes- - - - -		343	336	321	298
Total- - - - -	\$	\$6 379	\$5 386	\$5 552	\$4 686
<u>Summary</u>					
Cash balance - - - - -	\$	\$3 772	\$2 686	\$2 382	\$2 400
Farm products used in household- - - - -		293	252	260	278
Total inventory change - - - - -		2 698	660	1 540	581
Receipts less expenses - - - - -	\$	\$6 763	\$3 598	\$4 182	\$3 259
Total unpaid labor - - - - -		764	695	681	699
Net earnings per farm- - - - -	\$	\$5 999	\$2 903	\$3 501	\$2 560
Net earnings per acre- - - - -	\$	\$24.91	\$11.67	\$14.06	\$10.36

-3-

Inventory changes. The year 1941 was the ninth consecutive year of increasing inventories. The increases during the past four years ranged from \$2,698 in 1941 to \$581 in 1938 (Table 1). The largest increases in 1941 were for livestock and feed and grain. The average amounts of grain on hand in Area 3 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	3 658	3 894
Oats	829	839
Wheat	84	63
Soybeans	212	205

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$3,772, a larger margin than for any other year during the past four. The cash balance, the difference between cash receipts and expenses, is the amount of money which was available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$55 per month in 1941 and at \$50 per month in each of the three previous years.

The net earnings per farm averaged \$5,999 in 1941 compared with \$2,903 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 3. For example, 56 farms earned less than 10 percent on their investment, with an average rate earned of 7.9 percent; but 76 farms earned 22 percent or more, with an average rate earned of 24.6 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$1,594 for labor and management earnings contrasted with \$6,694 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 10.00	56	7.9	223	\$34 055	\$6 326	\$2 702	\$1 594
10.00 to 13.99	143	12.2	252	40 974	8 928	5 003	3 542
14.00 to 17.99	196	16.0	259	40 304	10 118	6 444	5 030
18.00 to 21.99	123	19.7	220	35 216	10 381	6 948	5 771
22.00 or more	76	24.6	220	30 978	10 956	7 622	6 694

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 3, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	15.9%	15.9%
Number of farms- - - - -	--	--	594
Acres in farm- - - - -	_____	241	241
Acres tillable - - - - -	_____	195	195
Acres in crops - - - - -	_____	155	155
Gross earnings per acre- - - - -	\$ _____	\$ _____ a/	\$38.00
Gross expenses per acre- - - - -	_____	_____	13.09
Net earnings per acre- - - - -	\$ _____	\$ _____	\$24.91
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 97	\$ 97
Value of improved land per acre- - - - -	_____	_____ a/	107
Value of improvements per acre - - - - -	_____	_____ e/	20
Total investment per acre- - - - -	_____	156	156
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ a/	80.9
Percent of tillable land in:			
Corn - - - - -	_____	_____	34.4
Oats - - - - -	_____	_____	18.0
Wheat- - - - -	_____	_____	3.4
Soybeans - - - - -	_____	_____	8.1
Other crops- - - - -	_____	_____	4.0
Legume hay and pasture - - - - -	_____	_____	20.8
Nonlegume hay and pasture- - - - -	_____	_____	11.3
<u>Crop Yields</u>			
Corn, bu.- - - - -	_____	_____ b/	68.2
Oats, bu.- - - - -	_____	_____	41.2
Wheat, bu.- - - - -	_____	_____	20.0
Soybeans, bu.- - - - -	_____	_____	24.7
<u>Livestock Factors</u>			
Value of feed fed to productive l.s. - - -	\$ _____	\$ 3 884	\$3 884
Feed fed per acre to productive l.s. - - -	_____	_____ c/	16.13
Returns per \$100 worth of feed fed - - -	_____	_____	183
Poultry returns per hen- - - - -	_____	3.85	3.85
Number of litters farrowed - - - - -	_____	28.2	28.2
Number of pigs weaned per litter - - - - -	_____	6.3	6.3
Returns per litter farrowed- - - - -	_____	151	151
Average number of cows milked- - - - -	_____	5.6	5.6
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ c/	103
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - -	\$ _____	\$ _____ d/	\$ 6.39
Labor cost per crop acre - - - - -	_____	_____ e/	7.98
Total months of labor- - - - -	_____	_____	21.8
Number of work horses- - - - -	_____	_____	2.8
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$ 1.50
Land tax per acre - - - - -	_____	_____ a/	1.24

Source of Standards:

- a/ Table 3, value of improved land.
b/ Figure 1, value of improved land.
c/ Table 4, source of income.

- d/ Table 6, size of farm and value of feed fed.
e/ Table 5, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Typo Area 3, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Gross expense per acre	Factors that affect expenses		
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked		Horse and machinery cost per crop acre	Labor cost per crop acre	Improvement cost per acre
				Corn, bu.	Oats, bu.	Soybeans, bu.									
25.9	491								6.35	226					
23.9	441								5.85	211					
21.9	391								5.35	196					
19.9	341								4.85	181					
17.9	291								4.35	166					
15.9	241								3.85	151					
13.9	191								3.35	136					
11.9	141								2.85	121					
9.9	91								2.35	106					
7.9	41								1.85	91					
5.9	--								1.35	76					
2%	50	\$4	2%	5	5	3	\$4	\$15	\$50	\$15	\$10	\$2	\$.50	\$1	\$.30

*Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 3, 1941

Item	Value of improved land					
	\$52 or less	\$53 to \$72	\$73 to \$92	\$93 to \$112	\$113 to \$132	\$133 or more
Average value of improved land-	\$ 45	\$ 65	\$ 83	\$ 103	\$ 122	\$ 144
Number of farms - - - - -	38	44	106	152	156	98
Acres per farm - - - - -	195	264	262	235	242	232
Percent of land area tillable -	64.0	62.8	75.1	83.2	86.8	89.7
Percent of tillable land in:						
Corn- - - - -	28.1	34.3	32.7	34.4	35.3	35.8
Oats- - - - -	16.2	16.3	16.2	18.7	18.6	19.1
Wheat - - - - -	4.5	5.0	5.1	2.5	2.9	2.4
Soybeans- - - - -	5.9	6.0	8.5	8.2	9.0	7.9
Other crops - - - - -	6.0	3.3	4.5	4.5	3.8	3.3
Legume hay and pasture- - -	21.7	24.8	20.8	20.7	19.9	22.0
Nonlegume hay and pasture - -	17.6	10.3	12.2	11.0	10.5	9.5
Gross earnings per acre - - - -	\$23.99	\$27.38	\$31.33	\$38.01	\$41.86	\$49.72
Gross expenses per acre - - - -	10.34	10.83	11.47	13.30	13.85	15.34
Net earnings per acre - - - - -	\$13.65	\$16.55	\$19.86	\$24.71	\$28.01	\$34.18
Land tax per acre - - - - -	\$.90	\$ 1.07	\$ 1.10	\$ 1.28	\$ 1.36	\$ 1.34

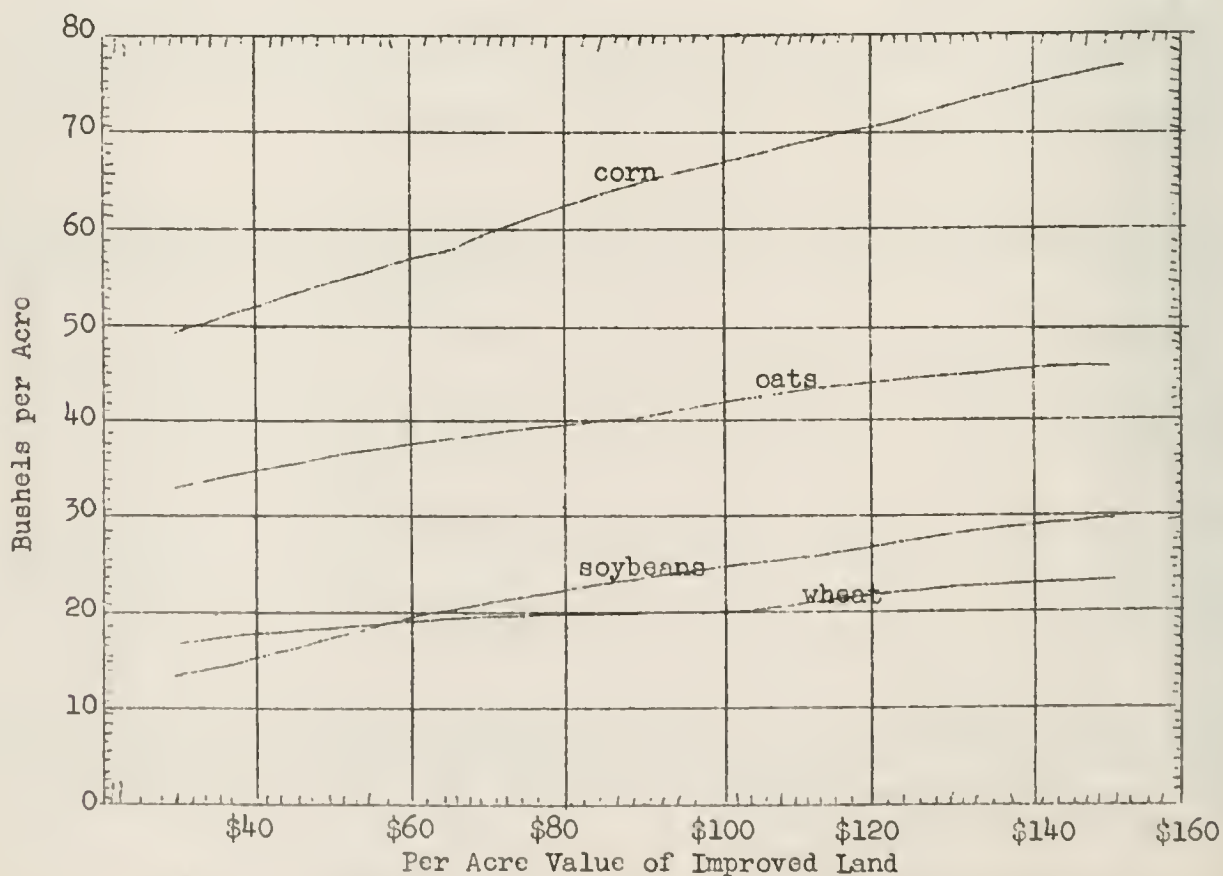


Fig. 1.--Average yields of corn, oats, wheat, and soybeans with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farms" (Table 2) are taken from Tables 3 to 6 and from Figure 1 as follows:

Table 3 - Value of improved land.

Gross earnings, gross expenses, and net earnings per acre.
Value of improved land per acre.
All items in the land-use section.
Land tax per acre.

Figure 1 - Value of improved land.

Yields for corn, oats, wheat, and soybeans.

Table 4 - Source of income.

Feed fed per acre to productive livestock.
Returns per \$100 worth of feed fed.
Dairy returns per cow.

Table 5 - Size of farm.

Value of improvements per acre.
Total months of labor.
Number of work horses.
Improvement cost per acre

Table 6 - Size of farm and amount of feed fed per acre.

Horse and machinery cost per crop acre.
Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops increased as the value per acre of improved land increased from an average of \$45 to \$144 (Table 3). Likewise the percent of land area tillable, the net earnings per acre, and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, wheat, and soybeans increased as the land value increased (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1941

Items	Source of income				
	Grain 40%+	Hogs 40%+	Cattle 40%+	General farms	
				L.S. 60%-	L.S. 60%+
Number of farms - - - - -	108	309	37	47	93
Percent income from prod. L.S.- -	36.7	88.9	92.6	55.3	71.0
Percent income from crops - - - -	54.0	1.8	--	32.9	18.7
<u>Investments</u>					
Total per farm- - - - -	\$41 480	\$35 655	\$55 976	\$34 620	\$33 942
Total per acre- - - - -	152	154	175	150	162
Land per acre - - - - -	105	93	96	96	100
Improvements per acre - - - - -	17	21	25	20	21
Machinery per acre- - - - -	9.08	9.89	9.53	9.87	11.08
<u>Earnings</u>					
Per farm					
Gross earnings- - - - -	\$ 9 380	\$ 9 104	\$13 663	\$ 8 288	\$ 8 210
Gross expenses- - - - -	3 134	3 124	5 625	2 841	2 965
Net earnings- - - - -	\$ 6 246	\$ 5 980	\$ 8 038	\$ 5 447	\$ 5 245
Per acre					
Gross earnings- - - - -	\$ 34.36	\$ 39.36	\$ 42.80	\$ 35.96	\$ 39.28
Gross expenses- - - - -	11.48	13.51	17.62	12.33	14.18
Net earnings- - - - -	\$ 22.88	\$ 25.85	\$ 25.18	\$ 23.63	\$ 25.10
Rate earned on investment - - -	15.1%	16.8%	14.4%	15.7%	15.5%
Labor and mgt. earnings - - - -	\$ 4 786	\$ 4 792	\$ 5 783	\$ 4 316	\$ 4 148
<u>Size and Intensity</u>					
Acres per farm - - - - -	273	231	319	231	209
Percent land area tillable- - -	87.1	79.2	73.9	81.6	81.8
Percent tillable land in grain-	70.3	62.0	61.9	64.7	63.0
Percent in hay and pasture- - -	24.6	35.2	34.7	29.9	33.0
Feed fed per acre to prod. L.S.	\$ 7.11	\$ 19.47	\$ 25.43	\$ 10.86	\$ 14.82
Months of labor per 100 crop A.	10.5	15.2	14.2	13.4	15.9
Total months of labor - - - - -	20.9	21.7	26.4	20.1	21.8
<u>Crop Yields Per Acre</u>					
Corn, bu. - - - - -	68.4	67.1	74.5	67.6	68.7
Oats, bu. - - - - -	40.4	41.4	46.3	38.2	40.6
<u>Livestock Returns</u>					
Per \$100 feed fed - - - - -	\$ 188	\$ 185	\$ 159	\$ 193	\$ 196
Hog returns per litter - - - - -	131	156	152	153	137
Dairy returns per cow - - - - -	89	96	103	97	126
<u>Expense Factors</u>					
Labor cost per crop acre- - - -	\$ 5.77	\$ 8.67	\$ 8.96	\$ 7.50	\$ 9.04
Horse and machinery cost per crop acre - - - - -	5.11	6.87	7.11	6.05	6.70
Improvement cost per acre - - -	1.23	1.57	1.89	1.28	1.52
Land tax per acre - - - - -	1.35	1.21	1.20	1.24	1.22

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer should, however, use caution in interpreting the data in Table 4. For example, the fact that hog farms showed the largest rate earned on the investment for 1941 and that cattle farms showed the smallest does not mean that such a relationship will prevail over a long period of years. The relative profitableness of these enterprises in 1941 was due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed which will be necessary to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, in a comparison of crop yields for the various types of farming, the following items, which indicate that the grain farms were located on the better land, should be noted: (1) high value of land per acre; (2) large percent of land area tillable; (3) large percent of land in grain; and (4) high land tax per acre.

Differences in expenses are highly significant for the five groups of farms. The labor cost per crop acre ranged from \$5.77 on the grain farms to \$9.04 on the general farms with the most livestock; the horse and machinery cost per crop acre was highest on the cattle farms, where it averaged \$7.11 and lowest on the grain farms, where it averaged \$5.11; and the improvement cost per acre averaged \$1.89 on the cattle farms and \$1.23 on the grain farms.

Size of farm. When the farm records in Farming-Type Area 3 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 35 largest farms had labor and management earnings which averaged \$8,123 contrasted with \$2,375 for the 69 smallest farms. The rate earned on investment did not differ significantly for the various size groups.

The farms which averaged 166 acres were operated more intensively than were the larger ones. This variation was indicated by the higher gross and net earnings per acre, by the larger labor and capital input per acre, and by the larger value of feed fed per acre to productive livestock.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1941

Item	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	69	213	144	96	37	35
Acres per farm- - - - -	99	166	243	326	403	567
<u>Investments</u>						
Total per farm- - - - -	\$15 729	\$28 108	\$37 371	\$52 372	\$62 656	\$72 924
Total per acre- - - - -	159	170	154	161	156	129
Land per acre - - - - -	95	102	98	102	96	79
Improvements per acre - - - - -	24	23	20	20	21	16
Machinery per acre- - - - -	11.53	12.22	9.74	9.17	8.56	7.31
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 4 227	\$ 7 100	\$ 9 139	\$12 278	\$14 634	\$17 024
Gross expenses- - - - -	1 660	2 497	3 148	4 081	4 724	5 892
Net earnings- - - - -	\$ 2 567	\$ 4 603	\$ 5 991	\$ 8 197	\$ 9 910	\$11 132
Per acre						
Gross earnings- - - - -	\$ 42.83	\$ 42.83	\$ 37.67	\$ 37.69	\$ 36.35	\$ 30.05
Gross expenses- - - - -	16.82	15.06	12.98	12.53	11.73	10.40
Net earnings- - - - -	\$ 26.01	\$ 27.77	\$ 24.69	\$ 25.16	\$ 24.62	\$ 19.65
Rate earned on investment - - -	16.3%	16.4%	16.0%	15.7%	15.8%	15.3%
Labor and management earnings -	\$ 2 375	\$ 3 790	\$ 4 717	\$ 6 175	\$ 7 368	\$ 8 123
<u>Size and Intensity</u>						
Percent of land area tillable -	86.2	84.6	81.7	82.3	79.4	70.4
Percent tillable land in grain-	62.3	63.4	64.4	63.6	66.0	65.3
Percent in hay and pasture- - -	35.1	33.8	31.8	31.7	30.5	30.0
Feed fed per acre to prod. l.s.	\$ 17.63	\$ 19.19	\$ 15.30	\$ 15.60	\$ 15.55	\$ 12.89
Percent of income from prod.l.s.	78.7	81.5	72.8	72.3	73.1	72.0
Percent of income from crops- -	9.9	8.7	17.5	19.1	17.7	18.4
Months of labor per 100 crop A.	20.9	16.6	13.9	12.5	11.5	10.8
Total months of labor - - - - -	14.0	18.4	22.0	26.5	29.5	35.2
Number of work horses - - - - -	2.2	2.5	2.7	3.1	3.7	3.6
<u>Crop Yields per Acre</u>						
Corn, bu. - - - - -	64.2	69.1	68.4	69.6	67.9	64.7
Oats, bu. - - - - -	41.0	41.1	40.9	42.1	41.9	39.4
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 202	\$ 189	\$ 186	\$ 180	\$ 175	\$ 172
Hog returns per litter- - - - -	142	150	152	155	151	153
Dairy returns per cow - - - - -	91	103	100	103	119	114
<u>Expense Factors</u>						
Labor cost per crop acre- - - -	\$ 11.53	\$ 9.22	\$ 7.82	\$ 7.37	\$ 6.68	\$ 6.45
Horse and machinery cost per crop acre - - - - -	6.98	7.04	6.16	6.11	5.97	6.13
Improvement cost per acre - - -	1.71	1.66	1.54	1.46	1.54	1.10
Land tax per acre - - - - -	1.32	1.30	1.22	1.24	1.26	1.17

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 3, 1941

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than \$10.00	\$10.00 to \$17.99	\$18.00 to \$25.99	\$26.00 or more	Less than \$10.00	\$10.00 to \$17.99	\$18.00 to \$25.99	\$26.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	\$11.09	\$11.23	\$12.17	\$12.75	\$6.30	\$6.49	\$7.82	\$9.70
121 to 200	8.33	8.56	9.53	11.44	5.76	6.30	7.20	8.73
201 to 280	6.66	8.14	8.94	10.20	5.32	6.07	6.76	7.42
281 to 360	5.75	7.50	8.72	9.79	4.52	5.99	6.70	7.17
361 to 440	5.30	7.27	7.61	8.59	4.50	5.90	6.60	7.00
441 or more	4.78	6.60	7.50	7.70	5.06	6.10	6.34	6.50

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grain are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 3, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	594	536	511	500
<u>Capital Investments</u>					
Land- - - - -	\$	\$23 338	\$23 757	\$23 904	\$23 731
Farm improvements - - - - -		4 903	5 023	4 943	4 537
Horses- - - - -		261	312	367	412
Productive livestock: Cattle- - -		2 390	2 244	2 000	1 561
Hogs- - - -		1 012	969	1 120	1 132
Sheep - - -		159	144	132	169
Poultry - -		85	83	89	90
Total productive livestock- - -	()	(3 646)	(3 440)	(3 341)	(2 952)
Feed and grain- - - - -		3 108	3 555	2 859	2 886
Machinery and equipment - - - -		2 157	2 198	2 167	2 016
Automobile (farm share) - - - -		217	208	188	181
Total - - - - -	\$	\$37 630	\$38 493	\$37 769	\$36 715
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle- - -		1 896	1 723	1 437	1 179
Dairy sales		475	365	313	342
Hogs- - - -		4 092	1 986	1 898	2 417
Sheep - - -		142	127	95	92
Poultry - -		120	75	57	73
Egg sales -		173	115	109	116
Total productive livestock- - -	()	(6 898)	(4 396)	(3 909)	4 219)
Farm products used in household -		293	252	260	278
Feed and grain - - - - -		1 381	532	1 302	507
Labor off farm - - - - -		40	58	44	58
Miscellaneous - - - - -		22	18	17	10
AAA payments- - - - -		518	546	782	193
Total - - - - -	\$	\$ 9 152	\$ 5 802	\$ 6 314	\$ 5 265
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 361	\$ 323	\$ 282	\$ 247
Horses- - - - -		24	24	14	12
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - -		732	653	615	568
Automobile (farm share) - - - -		129	117	102	106
Hired labor - - - - -		515	466	510	474
Miscellaneous - - - - -		42	40	41	40
Crop expense- - - - -		159	174	170	184
Livestock expense - - - - -		84	71	77	77
Taxes - - - - -		343	336	321	298
Total - - - - -	\$	\$ 2 389	\$ 2 204	\$ 2 132	\$ 2 006
Receipts less expenses- - - - -	\$	\$ 6 763	\$ 3 598	\$ 4 182	\$ 3 259
Family labor- - - - -		168	168	162	171
Returns for labor, capital, mgt. \$		\$ 6 595	\$ 3 430	\$ 4 020	\$ 3 088
Operator's labor- - - - -		596	527	519	528
Net earnings per farm - - - - -	\$	\$ 5 999	\$ 2 903	\$ 3 501	\$ 2 560
Rate Earned on Investment - - - -	%	15.9%	7.5%	9.3%	7.0%
Interest on investment- - - - -	\$	\$ 1 881	\$ 1 924	\$ 1 839	\$ 1 835
Labor and Management Earnings - - -		4 714	1 506	2 131	1 253
Nonfarm income- - - - -	\$	\$ 54	\$ 30	\$ 46	\$ 61

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA FOUR East Central Cash Grain Area

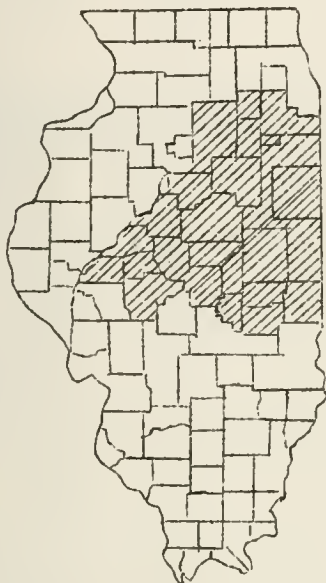
DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON SEVEN HUNDRED THREE FARMS IN FARMING-TYPE AREA 4, 1941

By P. E. Johnston, J. B. Cunningham, and R. J. Mutti^{1/}

Farm earnings of accounting farms in Farming-Type Area 4 were much higher in 1941 than in 1940. The average net earnings per acre were \$22.69 in 1941, \$10.19 in 1940, \$12.60 in 1939, and \$9.67 in 1938. The items considered in calculating the net earnings included: inventory changes; cash receipts; cash expenses; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940 (Table 1).



▨ Farming-Type Area 4
Cash grain

Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, especially for feed and machinery, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all the farms in the area, the crop yields were above average, and the farm operators were more skillful than average in the organization and operation of their farms. Therefore, the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his business operations in order to locate the strong and weak places in the management of his farm. The data in Tables 1 to 7 and Figure 1 are particularly well adapted for such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.

^{1/} W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

J. E. Harris, Champaign County
H. D. Triplett, Ford County
H. D. VanMatre, Iroquois County
Edwin Bay, Sangamon County
I. E. Parett, Vermilion County
G. T. Swaim, Kankakee County
L. W. Braham, Will County
Paul M. Krows, Moultrie County
J. R. Gilkey, Macon County
R. V. Watson, Mason County

N. H. Anderson, Logan County
H. N. Myers, DeWitt County
W. P. Miller, Kendall County
L. W. Chalcraft, Menard County
G. H. Husted, Cass County
L. E. McKinzie, Edgar County
J. Q. Scott, Douglas County
E. O. Johnston, Piatt County
W. S. Myers, Coles County

TABLE 1.--INVENTORY CHANGES, CASH RECEIPTS, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 4, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	703	582	559	767
Acres per farm - - - - -		265	271	268	263
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 76	\$ 83	\$ 155	\$ 116
Livestock- - - - -		797	270	159	107
Feed and grain - - - - -		1 416	-104	994	134
Machinery and equipment- - - - -		261	104	99	162
Automobile (farm share)- - - - -		29	15	10	--
Total- - - - -	\$	\$2 579	\$ 338	\$1 417	\$ 519
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 9	\$ 17	\$ 13	\$ 12
Horses - - - - -		40	47	62	80
Productive livestock: Cattle - - -		1 762	1 624	1 382	1 312
Dairy sales- - - - -		553	418	367	491
Hogs - - - - -		1 701	1 012	945	1 283
Sheep- - - - -		128	88	118	180
Poultry- - - - -		149	111	102	118
Egg sales- - - - -		225	156	130	172
Total productive livestock - - -	()	(4 518)	(3 409)	(3 044)	(3 556)
Feed and grain - - - - -		3 571	2 801	2 466	2 355
Machinery and equipment- - - - -		311	291	280	313
Automobile (farm share)- - - - -		61	52	38	36
Labor off farm - - - - -		39	40	50	67
Miscellaneous- - - - -		10	9	11	7
AAA payments - - - - -		525	577	679	250
Total- - - - -	\$	\$9 084	\$7 243	\$6 643	\$6 676
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 398	\$ 383	\$ 421	\$ 401
Horses - - - - -		22	22	33	34
Productive livestock: Cattle - - -		890	873	782	702
Hogs - - - - -		129	87	115	107
Sheep- - - - -		68	56	64	108
Poultry- - - - -		39	30	30	33
Total productive livestock - - -	()	(1 126)	(1 046)	(991)	(950)
Feed and grain - - - - -		804	530	535	434
Machinery and equipment- - - - -		1 402	1 122	1 042	1 138
Automobile (farm share)- - - - -		227	189	164	155
Hired labor- - - - -		486	436	432	458
Miscellaneous- - - - -		34	30	29	36
Crop expense - - - - -		175	172	153	184
Livestock expense- - - - -		65	52	56	54
Taxes- - - - -		398	397	373	360
Total- - - - -	\$	\$5 137	\$4 379	\$4 229	\$4 204
<u>Summary</u>					
Cash balance - - - - -	\$	\$3 947	\$2 864	\$2 414	\$2 472
Farm products used in household- -		273	225	235	265
Total inventory change - - - - -		2 579	368	1 417	519
Receipts less expenses - - - - -	\$	\$6 799	\$3 457	\$4 066	\$3 256
Total unpaid labor - - - - -		785	696	695	712
Net earnings per farm- - - - -	\$	\$6 014	\$2 761	\$3 371	\$2 544
Net earnings per acre- - - - -	\$	\$22.69	\$10.19	\$12.60	\$ 9.67

Inventory changes. The year 1941 was the ninth consecutive year of increasing inventories. The increases during the past four years ranged from \$2 579 in 1941 to \$368 in 1940 (Table 1). The largest increases in 1941 were for livestock and feed and grain. The average amounts of grain on hand in Area 4 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	3 662	4 346
Oats	941	978
Wheat	191	195
Soybeans	396	374

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$3 947, a larger margin than for any other year during the past four. The cash balance, the difference between cash receipts and expenses, is the amount of money which was available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$55 per month in 1941 and at \$50 per month in each of the three previous years.

The net earnings per farm averaged \$6 014 in 1941 compared with \$2 761 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 4. For example, 95 farms earned less than ten percent on their investment, with an average rate earned of 7.9 percent; but 32 farms earned twenty-two percent or more, with an average rate earned of 24.1 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$1 685 for labor and management earnings contrasted with \$7 516 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 10.00	95	7.9	227	\$37 637	\$ 6 310	\$2 980	\$1 685
10.00 to 13.99	251	12.1	257	41 637	8 383	5 041	3 545
14.00 to 17.99	223	15.8	285	45 580	10 588	7 183	5 494
18.00 to 21.99	102	19.6	273	40 092	11 093	7 841	6 468
22.00 or more	32	24.1	276	35 977	12 526	8 683	7 516

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 4, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	14.4%	14.4%
Number of farms- - - - -	--	--	703
Acres in farm- - - - -	_____	265	265
Acres tillable - - - - -	_____	239	239
Acres in crops - - - - -	_____	197	197
Gross earnings per acre- - - - -	\$ _____	\$ _____ a/	\$34.92
Gross expenses per acre- - - - -	_____	_____	12.23
Net earnings per acre- - - - -			22.69
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 109	\$ 109
Value of improved land per acre- - - - -	_____	_____ a/	113
Value of improvements per acre - - - - -	_____	_____ e/	16
Total investment per acre- - - - -		158	158
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ a/	90.0
Percent of tillable land in:			
Corn - - - - -	_____	_____	30.9
Oats - - - - -	_____	_____	14.9
Wheat- - - - -	_____	_____	7.6
Soybeans - - - - -	_____	_____	17.1
Other crops- - - - -	_____	_____	4.7
Legume hay and pasture - - - - -	_____	_____	16.3
Nonlegume hay and pasture- - - - -	_____	_____	8.5
<u>Crop Yields</u>			
Corn, bu.- - - - -	_____	_____ b/	65.6
Oats, bu.- - - - -	_____	_____	49.1
Wheat, bu.- - - - -	_____	_____	23.1
Soybeans, bu.- - - - -	_____	_____	25.5
<u>Livestock Factors</u>			
Value of feed fed to productive livestock- -	\$ _____	\$2 468	\$2 468
Feed fed per acre to productive livestock- -	_____	_____ c/	9.31
Returns per \$100 worth of feed fed - - - -	_____	_____	180
Poultry returns per hen- - - - -	_____	3.75	3.75
Number of litters farrowed - - - - -	_____	16.2	16.2
Number of pigs weaned per litter - - - - -	_____	6.3	6.3
Returns per litter farrowed- - - - -	\$ _____	\$ 144	\$ 144
Average number of cows milked- - - - -	_____	5.8	5.8
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ c/	\$ 111
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - - -	\$ _____	\$ _____ d/	\$ 5.50
Labor cost per crop acre - - - - -	_____	_____	6.04
Total months of labor- - - - -	_____	_____ e/	22.2
Number of work horses- - - - -	_____	_____	2.8
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$ 1.18
Land tax per acre- - - - -	_____	_____ a/	1.34

Source of Standards:

a/ Table 3, value of improved land.

b/ Fig. 1, value of improved land.

c/ Table 4, source of income.

d/ Table 6, size of farm and value of feed fed.

e/ Table 5, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 4, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Gross expense per acre	Factors that affect expenses		
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked		Horse and machinery cost per crop acre	Labor cost per crop acre	Improvement cost per acre
				Corn, bu.	Oats, bu.	Soybeans, bu.									
24.4	515								6.25	219					
22.4	465								5.75	204					
20.4	415								5.25	189					
18.4	365								4.75	174					
16.4	315								4.25	159					
14.4	265								3.75	144					
12.4	215								3.25	129					
10.4	165								2.75	114					
8.4	115								2.25	99					
6.4	65								1.75	84					
4.4	--								1.25	69					
2%	50	\$4	2%	5	5	3	\$2	\$15	\$0.50	\$15	\$10	\$2	\$0.50	\$1	\$0.30

* Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 4, 1941

Item	Value of Improved Land					
	Less than \$53	\$53 to \$72	\$73 to \$92	\$93 to \$112	\$113 to \$132	More than \$132
Average value of improved land- - -	\$ 42	\$ 65	\$ 84	\$ 103	\$ 123	\$ 146
Number of farms - - - - -	25	48	74	173	221	162
Acres per farm- - - - -	315	242	287	270	255	262
Percent of land area tillable - - -	80.2	80.0	85.7	88.7	93.0	94.3
Percent of tillable land in:						
Corn- - - - -	26.1	27.0	28.6	31.5	32.1	31.7
Oats- - - - -	12.4	14.7	13.3	15.9	15.8	13.7
Wheat - - - - -	12.6	10.0	10.7	7.1	6.4	6.4
Soybeans- - - - -	6.8	10.5	14.6	16.0	17.4	21.9
Other crops - - - - -	15.6	6.1	4.7	5.6	3.9	3.5
Legume hay and pasture- - - - -	18.0	19.6	19.2	15.7	15.7	15.4
Nonlegume hay and pasture - - - -	8.5	12.1	8.9	8.2	8.7	7.4
Gross earnings per acre - - - - -	\$18.65	\$25.81	\$30.12	\$34.52	\$37.70	\$39.56
Gross expenses per acre - - - - -	8.42	10.51	11.54	12.18	12.78	13.09
Net earnings per acre - - - - -	\$10.23	\$15.30	\$18.58	\$22.34	\$24.92	\$26.47
Land tax per acre - - - - -	\$.90	\$ 1.05	\$ 1.13	\$ 1.29	\$ 1.42	\$ 1.53

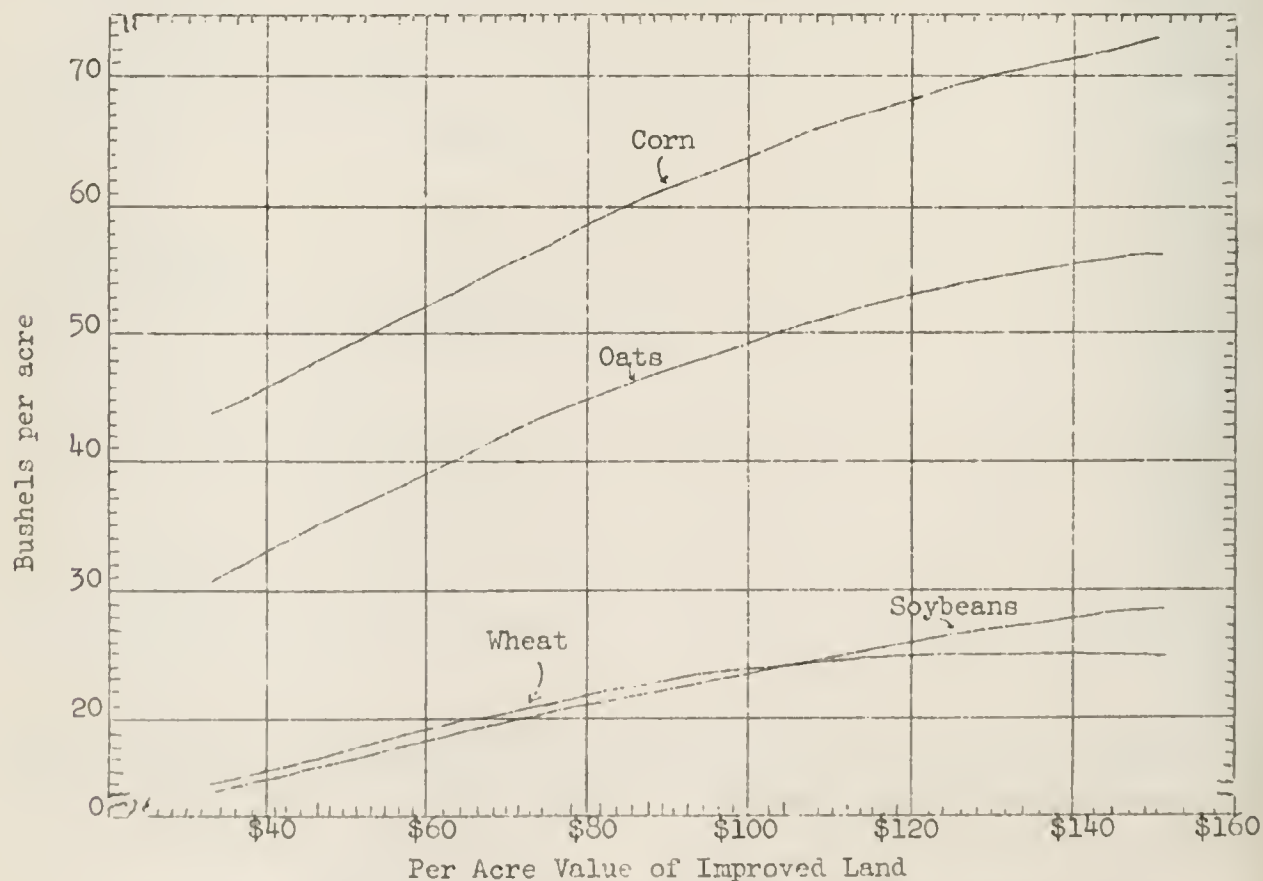


Fig. 1.--Average yields of corn, oats, wheat, and soybeans with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farms" (Table 2) are taken from Tables 3 to 6 and from Figure 1 as follows:

- Table 3 - Value of improved land.
 - Gross earnings, gross expenses, and net earnings per acre.
 - Value of improved land per acre.
 - All items in the land-use section.
 - Land tax per acre.
- Figure 1 - Value of improved land.
 - Yields for corn, oats, wheat, and soybeans.
- Table 4 - Source of income.
 - Feed fed per acre to productive livestock.
 - Returns per \$100 worth of feed fed.
 - Dairy returns per cow.
- Table 5 - Size of farm.
 - Value of improvements per acre.
 - Total months of labor.
 - Number of work horses.
 - Improvement cost per acre.
- Table 6 - Size of farm and amount of feed fed per acre.
 - Horse and machinery cost per crop acre.
 - Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops increased as the value per acre of improved land increased from an average of \$42 to \$146 (Table 3). Likewise the percent of land area tillable, the net earnings per acre, and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture was higher on farms with low valued land than on farms with high valued land.

Yields per acre for corn, oats, wheat, and soybeans increased as the land value increased (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1941

Items	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms - - - - -	433	13	91	24	76	66
Percent of income from prod. L.S.	29.3	75.7	81.7	92.6	54.1	70.2
Percent of income from crops - -	61.6	15.8	9.6	--	34.4	20.8
<u>Investments</u>						
Total per farm- - - - -	\$44 269	\$25 652	\$35 947	\$63 205	\$33 128	\$39 752
Total per acre- - - - -	159	147	161	166	146	159
Land per acre - - - - -	115	84	103	102	98	98
Improvements per acre - - - - -	15	27	20	16	16	22
Machinery per acre- - - - -	9.57	10.40	10.25	8.27	9.45	10.15
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 9 545	\$ 5 852	\$ 8 491	\$15 132	\$ 7 464	\$ 9 261
Gross expenses- - - - -	3 253	2 860	3 038	5 527	2 852	3 391
Net earnings- - - - -	\$ 6 292	\$ 2 992	\$ 5 453	\$ 9 605	\$ 4 612	\$ 5 870
Per acre						
Gross earnings- - - - -	\$ 34.18	\$ 33.48	\$ 37.94	\$ 39.65	\$ 32.99	\$ 37.10
Gross expenses- - - - -	11.65	16.36	13.58	14.48	12.61	13.59
Net earnings- - - - -	\$ 22.53	\$ 17.12	\$ 24.36	\$ 25.17	\$ 20.38	\$ 23.51
Rate earned on investment - - -	14.2%	11.7%	15.2%	15.2%	13.9%	14.8%
Labor and management earnings -	\$ 4 674	\$ 2 340	\$ 4 263	\$ 6 999	\$ 3 545	\$ 4 479
<u>Size and Intensity</u>						
Acres per farm- - - - -	279	175	224	382	226	250
Percent of land area tillable -	91.8	80.8	84.9	86.5	89.7	87.3
Percent tillable land in grain-	73.4	56.7	67.5	61.7	66.5	65.8
Percent in hay and pasture- - -	21.7	39.5	29.9	32.9	29.2	31.2
Feed fed per acre to prod. L.S.	\$ 5.58	\$ 12.89	\$ 18.16	\$ 25.70	\$ 10.23	\$ 15.18
Months of labor per 100 crop A.	9.9	21.9	14.1	12.8	13.2	14.2
Total months of labor - - - - -	21.5	22.9	21.6	32.8	21.4	24.5
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	65.7	59.9	66.1	70.5	62.8	65.0
Soybeans, bu. - - - - -	25.9	17.8	23.8	27.5	22.9	24.4
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 193	\$ 205	\$ 176	\$ 145	\$ 185	\$ 178
Hog returns per litter- - - - -	139	157	150	149	141	140
Dairy returns per cow - - - - -	103	174	97	110	115	128
<u>Expense Factors</u>						
Labor cost per crop acre- - -	\$ 5.56	\$ 11.52	\$ 7.85	\$ 7.08	\$ 7.12	\$ 7.91
Horse and machinery cost						
per crop acre - - - - -	5.16	9.25	6.32	6.51	5.67	6.13
Improvement cost per acre - - -	1.06	1.53	1.48	1.33	1.24	1.47
Land tax per acre - - - - -	1.37	1.13	1.32	1.35	1.29	1.25

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer should, however, use caution in interpreting the data in Table 4. For example, the fact that hog and cattle farms showed the largest rate earned on the investment for 1941 and that dairy farms showed the smallest does not mean that such a relationship will prevail over a long period of years. The relative profitableness of these enterprises in 1941 was due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed which is necessary to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, in a comparison of crop yields for the various types of farming, the following items, which indicate that the grain farms were located on the better land, should be noted: (1) high value of land per acre; (2) large percent of land area tillable; (3) large percent of land in grain; and (4) high land tax per acre.

Differences in expenses are highly significant for the six groups of farms. Labor input per 100 crop acres was highest on the dairy farms, where 21.9 months of labor were used, and lowest on the grain farms, where 9.9 months of labor were used. The dairy farmers evidently utilized a large amount of available labor to increase the size of their businesses without increasing the size of their farms.

The labor cost per crop acre ranged from \$5.56 on the grain farms to \$11.52 on the dairy farms; the horse and machinery cost per crop acre was highest on the dairy farms where it averaged \$9.25 and lowest on the grain farms, where it averaged \$5.16; and the improvement cost per acre averaged \$1.53 on the dairy farms and \$1.06 on the grain farms.

Size of farm. When the farm records in Farming-Type Area 4 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 63 largest farms had labor and management earnings which averaged \$8 814 contrasted with \$1 898 for the 55 smallest farms. The rate earned on investment was smallest on the two groups of farms under 200 acres in size, and did not differ significantly for the other size groups.

The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the higher gross earnings per acre, by the larger labor and capital input per acre, and by the higher value of feed fed per acre to productive livestock.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1941

Item	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	55	215	184	129	57	63
Acres per farm- - - - -	103	167	242	320	400	575
<u>Investments</u>						
Total per farm- - - - -	\$17 431	\$28 156	\$39 367	\$48 472	\$62 092	\$84 900
Total per acre- - - - -	169	169	163	152	155	148
Land per acre - - - - -	105	114	114	108	109	103
Improvements per acre - - - - -	25	20	17	15	14	14
Machinery per acre- - - - -	13.21	11.43	10.27	9.17	8.36	7.82
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 3 994	\$ 6 215	\$ 8 666	\$10 819	\$13 897	\$18 569
Gross expenses- - - - -	1 816	2 352	3 081	3 648	4 465	6 073
Net earnings- - - - -	\$ 2 178	\$ 3 863	\$ 5 585	\$ 7 171	\$ 9 432	\$12 496
Per acre						
Gross earnings- - - - -	\$ 38.74	\$ 37.26	\$ 35.81	\$ 33.81	\$ 34.77	\$ 32.26
Gross expenses- - - - -	17.61	14.10	12.73	11.40	11.17	10.55
Net earnings- - - - -	\$ 21.13	\$ 23.16	\$ 23.08	\$ 22.41	\$ 23.60	\$ 21.71
Rate earned on investment - - -	12.5%	13.7%	14.2%	14.8%	15.2%	14.7%
Labor and management earnings -	\$ 1 898	\$ 3 057	\$ 4 212	\$ 5 336	\$ 6 931	\$ 8 814
<u>Size and Intensity</u>						
Percent of land area tillable -	90.3	91.7	91.0	88.7	89.6	89.0
Percent tillable land in grain-	66.1	70.9	72.8	71.5	70.1	68.6
Percent in hay and pasture- - -	30.5	26.1	23.2	23.9	25.1	25.3
Feed fed per acre to prod. 1.s.	\$ 13.68	\$ 9.88	\$ 8.78	\$ 8.17	\$ 9.85	\$ 9.66
Percent of income from prod.1.s.	63.4	48.3	43.1	41.9	46.8	46.5
Percent of income from crops- -	24.6	41.5	47.4	49.3	44.9	45.5
Months of labor per 100 crop A.	19.4	13.7	11.5	10.4	10.0	8.8
Total months of labor - - - -	14.7	17.2	21.3	24.9	29.7	35.8
Number of work horses - - - -	2.0	2.2	2.6	3.1	3.8	4.2
<u>Crop Yields per Acre</u>						
Corn, bu. - - - - -	63.9	65.9	65.9	66.1	65.7	64.7
Soybeans, bu. - - - - -	22.5	24.3	25.3	26.1	26.3	25.9
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 191	\$ 193	\$ 186	\$ 182	\$ 172	\$ 160
Hog returns per litter- - - -	148	147	144	142	138	141
Dairy returns per cow - - - -	116	112	118	108	105	96
<u>Expense Factors</u>						
Labor cost per crop acre- - -	\$ 10.60	\$ 7.49	\$ 6.36	\$ 5.77	\$ 5.57	\$ 5.08
Horse and machinery cost per crop acre - - - - -	7.40	5.98	5.63	5.15	5.13	5.17
Improvement cost per acre - -	1.60	1.42	1.20	1.06	1.03	1.08
Land tax per acre - - - - -	1.37	1.40	1.35	1.30	1.34	1.30

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 4, 1941

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than \$5.00	\$5.00 to \$9.99	\$10.00 to \$14.99	\$15.00 or more	Less than \$5.00	\$5.00 to \$9.99	\$10.00 to \$14.99	\$15.00 or more
	(labor cost per crop acre)					(horse and machinery cost per crop acre)		
Less than 121	\$8.40	\$10.48	\$11.40	\$13.50	\$6.40	\$6.90	\$8.19	\$8.31
121 to 200	6.52	7.43	7.97	9.20	5.08	6.01	6.33	7.03
201 to 280	5.26	6.27	7.60	8.04	4.93	5.93	6.10	6.30
281 to 360	5.01	5.73	6.85	7.81	4.80	5.00	5.81	5.90
361 to 440	4.80	5.65	6.14	6.42	4.62	4.90	5.20	5.75
441 or more	3.88	5.59	6.07	6.24	4.50	4.85	5.10	5.60

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grain are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 4, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	703	582	559	767
<u>Capital Investments</u>					
Land- - - - -	\$	\$28 998	\$29 028	\$28 902	\$30 408
Farm improvements - - - - -		4 334	4 353	4 122	4 662
Horses- - - - -		268	345	413	471
Productive livestock: Cattle- - - - -		1 704	1 561	1 323	1 369
Hogs- - - - -		478	463	469	576
Sheep - - - - -		92	77	104	105
Poultry - - - - -		104	99	101	113
Total productive livestock- - - - -	()	(2 378)	(2 200)	(1 997)	(2 163)
Feed and grain- - - - -		3 334	3 776	2 963	3 199
Machinery and equipment - - - - -		2 327	2 249	2 172	2 184
Automobile (farm share) - - - - -		226	205	194	207
Total - - - - -	\$	\$41 865	\$42 156	\$40 763	\$43 366
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -		1 265	1 019	840	782
Dairy sales - - - - -		553	418	367	491
Hogs- - - - -		1 961	948	807	1 166
Sheep - - - - -		87	61	48	75
Poultry - - - - -		138	85	68	85
Egg sales - - - - -		225	156	130	172
Total productive livestock- - - - -	()	(4 227)	(2 687)	(2 260)	(2 771)
Farm products used in household - - - - -		273	225	235	265
Feed and grain- - - - -		4 183	2 167	2 925	2 055
Labor off farm- - - - -		39	40	50	67
Miscellaneous - - - - -		10	9	11	7
AAA payments- - - - -		525	577	679	250
Total - - - - -	\$	\$ 9 257	\$ 5 705	\$ 6 160	\$ 5 415
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 313	\$ 283	\$ 253	\$ 273
Horses- - - - -		20	29	19	12
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - - -		830	727	663	663
Automobile (farm share) - - - - -		137	122	116	119
Hired labor - - - - -		486	436	432	458
Miscellaneous - - - - -		34	30	29	36
Crop expense- - - - -		175	172	153	184
Livestock expense - - - - -		65	52	56	54
Taxes - - - - -		398	397	373	360
Total - - - - -	\$	\$ 2 458	\$ 2 248	\$ 2 094	\$ 2 159
Receipts less expenses- - - - -	\$	\$ 6 799	\$ 3 457	\$ 4 066	\$ 3 256
Family labor- - - - -		189	153	164	172
Returns for labor, capital, mgt.- - - - -	\$	\$ 6 610	\$ 3 304	\$ 3 902	\$ 3 084
Operator's labor- - - - -		596	543	531	540
Net earnings per farm - - - - -	\$	\$ 6 014	\$ 2 761	\$ 3 371	\$ 2 544
Rate Earned on Investment - - - - -	%	14.4%	6.5%	8.3%	5.9%
Interest on investment- - - - -	\$	\$ 2 093	\$ 2 108	\$ 2 039	\$ 2 169
Labor and Management Earnings - - - - -		4 517	1 196	1 863	915
Nonfarm income- - - - -	\$	\$ 95	\$ 68	\$ 116	\$ 78

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA FIVE West Central General Farming Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON THREE HUNDRED SIXTY-TWO FARMS IN FARMING-TYPE AREA 5, 1941

By P. E. Johnston, J. B. Cunningham, and K. E. Kinsinger^{1/}

Farm earnings of accounting farms in Farming-Type Area 5 were much higher in 1941 than in 1940. The average net earnings per acre were \$18.39 in 1941, \$9.04 in 1940, \$9.77 in 1939, and \$7.93 in 1938. The items considered in calculating the net earnings included: inventory changes; cash receipts; cash expenses; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940 (Table 1).

Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, especially for feed and machinery, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all the farms in the area, the crop yields were above average, and the farm operators were more skillful than average in the organization and operation of their farms. Therefore, the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his business operations in order to locate the strong and weak places in the management of his farm. The

data in Tables 1 to 7 and Figure 1 are particularly well adapted for such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.



▨ Farming-Type Area 5
General Farming

^{1/} W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

W. S. Batson, Shelby County
G. B. Whitman, Adams County
C. S. Love, Christian County
A. E. Snyder, Montgomery County
W. F. Coolidge, Morgan County
O. O. Mowery, Macoupin County

W. B. Bunn, Pike County
C. T. Kibler, Jersey County
W. F. Purnell, Greene County
E. H. Garlich, Brown County
G. H. Reid, Scott County
R. K. Wise, Schuyler County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 5, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	362	316	315	318
Acres per farm - - - - -		250	255	261	242
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 75	\$ 118	\$ 99	\$ 69
Livestock- - - - -		930	343	298	219
Feed and grain - - - - -		940	301	590	67
Machinery and equipment- - - - -		261	87	110	158
Automobile (farm share)- - - - -		35	21	11	4
Total - - - - -	\$	\$ 2 241	\$ 870	\$ 1 108	\$ 517
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 6	\$ 10	\$ 12	\$ 3
Horses - - - - -		40	43	53	59
Productive livestock: Cattle - - - - -		2 225	1 782	1 668	1 144
Dairy sales		689	522	432	466
Hogs - - - - -		2 448	1 455	1 482	1 488
Sheep- - - - -		190	124	115	90
Poultry- - - - -		110	81	95	85
Egg sales-		178	116	115	136
Total productive livestock - - - - -	()	(5 840)	(4 080)	(3 907)	(3 409)
Feed and grain - - - - -		1 766	1 264	1 387	1 167
Machinery and equipment- - - - -		281	249	265	256
Automobile (farm share)- - - - -		61	48	46	34
Labor off farm - - - - -		39	43	52	58
Miscellaneous- - - - -		10	13	18	8
AAA payments - - - - -		333	426	454	171
Total- - - - -	\$	\$ 8 376	\$ 6 176	\$ 6 194	\$ 5 165
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 367	\$ 368	\$ 320	\$ 261
Horses - - - - -		27	23	30	38
Productive livestock: Cattle - - - - -		1 202	978	976	565
Hogs - - - - -		233	149	213	130
Sheep- - - - -		88	56	57	34
Poultry- - - - -		27	20	24	23
Total productive livestock - - - - -	()	(1 550)	(1 203)	(1 270)	(752)
Feed and grain - - - - -		1 174	726	688	524
Machinery and equipment- - - - -		1 158	857	872	813
Automobile (farm share)- - - - -		209	167	161	131
Hired labor- - - - -		421	370	379	318
Miscellaneous- - - - -		34	25	33	25
Crop expense - - - - -		142	124	133	118
Livestock expense- - - - -		70	54	61	52
Taxes- - - - -		296	294	289	256
Total- - - - -	\$	\$ 5 448	\$ 4 211	\$ 4 236	\$ 3 288
<u>Summary</u>					
Cash balance - - - - -	\$	\$ 2 928	\$ 1 965	\$ 1 958	\$ 1 877
Farm products used in household-		283	244	256	279
Total inventory change - - - - -		2 241	870	1 108	517
Receipts less expenses - - - - -	\$	\$ 5 452	\$ 3 079	\$ 3 322	\$ 2 673
Total unpaid labor - - - - -		850	770	769	755
Net earnings per farm- - - - -	\$	\$ 4 602	\$ 2 309	\$ 2 553	\$ 1 918
Net earnings per acre- - - - -	\$	\$ 18.39	\$ 9.04	\$ 9.77	\$ 7.93

Inventory changes. The year 1941 was the ninth consecutive year of increasing inventories. The increases during the past four years ranged from \$2,241 in 1941 to \$517 in 1938 (Table 1). The largest increases in 1941 were for livestock and feed and grain. The average amounts of grain on hand in Area 5 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	2,205	2,624
Oats	501	534
Wheat	294	276
Soybeans	210	214

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$2,928, a larger margin than for any other year during the past four years. The cash balance, the difference between cash receipts and expenses, is the amount of money which will be available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$55 per month in 1941 and at \$50 per month in each of the three previous years.

The net earnings per farm averaged \$4,602 in 1941 compared with \$2,309 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 5. For example, 42 farms earned less than 9 percent on their investment, with an average rate earned of 6.4 percent; but 42 farms earned 24 percent or more, with an average rate earned of 28.3 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$936 for labor and management earnings contrasted with \$5,118 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 9.0	42	6.4	252	\$25 127	\$4 801	\$1 600	\$ 936
9.00 to 13.99	79	11.9	244	29 731	6 548	3 534	2 651
14.00 to 18.99	123	16.6	252	28 794	7 905	4 771	3 918
19.00 to 23.99	76	21.0	279	31 495	9 960	6 623	5 671
24.00 or more	42	28.3	204	19 289	8 210	5 464	5 118

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 5, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	16.4%	16.4%
Number of farms- - - - -	--	--	362
Acres in farm - - - - -	_____	250	250
Acres tillable - - - - -	_____	199	199
Acres in crops - - - - -	_____	148	148
Gross earnings per acre- - - - -	\$ _____	\$ _____ a/	\$ 29.78
Gross expenses per acre- - - - -	_____	_____	11.39
Net earnings per acre- - - - -			18.39
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 68	\$ 68
Value of improved land per acre- - - - -	_____	_____ a/	75
Value of improvements per acre- - - - -	_____	_____ e/	15
Total investment per acre- - - - -		112	112
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ a/	79.6
Percent of tillable land in:			
Corn - - - - -	_____	_____	25.4
Oats - - - - -	_____	_____	10.5
Wheat- - - - -	_____	_____	12.5
Soybeans - - - - -	_____	_____	11.6
Other crops- - - - -	_____	_____	5.1
Legume hay and pasture - - - - -	_____	_____	21.3
Nonlegume hay and pasture- - - - -	_____	_____	13.6
<u>Crop Yields</u>			
Corn - - - - -	_____	_____ b/	64.0
Oats - - - - -	_____	_____	43.0
Wheat- - - - -	_____	_____	22.1
Soybeans - - - - -	_____	_____	22.4
<u>Livestock Factors</u>			
Value of feed fed to prod. l.s.- - - - -	\$ _____	\$2 911	\$2 911
Feed fed per acre to prod. l.s.- - - - -	_____	_____ c/	11.63
Returns per \$100 worth of feed fed - - - - -	_____	_____	188
Poultry returns per hen- - - - -	_____	3.37	3.37
Number of litters farrowed - - - - -	_____	19.6	19.6
Number of pigs weaned per litter - - - - -	_____	6.4	6.4
Returns per litter farrowed- - - - -	\$ _____	\$ 145	\$ 145
Average number of cows milked- - - - -	_____	6.6	6.6
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ c/	\$ 117
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - - - - -	\$ _____	\$ _____ d/	\$ 5.96
Labor cost per crop acre - - - - -	_____	_____	8.35
Total months of labor- - - - -	_____	_____ c/	22.8
Number of work horses- - - - -	_____	_____	3.3
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$ 1.14
Land tax per acre- - - - -	_____	_____ a/	1.03

Source of Standards:

a/ Table 3, value of improved land.

b/ Fig. 1, value of improved land.

c/ Table 4, source of income.

d/ Table 6, size of farm and value of feed fed.

e/ Table 5, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 5, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Total expense per acre	Factors that affect expenses		
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked		Horse and machinery cost per crop acre	Labor cost per crop acre	Improvement cost per acre
				Corn, bu.	Oats, bu.	Wheat, bu.									
31	500								4.87	195					
28	450								4.57	185					
25	400								4.27	175					
22	350								3.97	165					
19	300								3.67	155					
16.4	250								3.37	145					
13	200								3.07	135					
10	150								2.77	125					
7	100								2.47	115					
4	50								2.17	105					
1	---								1.87	95					
3%	50	\$3	3%	4	4	2	\$2	\$20	\$.30	\$10	\$10	\$1	\$.50	\$1	\$.20

*Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 5, 1941

Item	Value of improved land					
	Less than \$43	\$43 to \$62	\$63 to \$82	\$83 to \$102	\$103 to \$122	More than \$122
Average value of improved land- - -	\$35	\$53	\$73	\$95	\$111	\$128
Number of farms - - - - -	46	85	105	84	15	27
Acres per farm- - - - -	281	241	248	241	267	254
Percent of land area tillable - - -	67.8	76.8	79.9	85.0	87.7	88.6
Percent of tillable land in:						
Corn- - - - -	20.7	23.4	24.9	27.7	30.5	30.2
Oats- - - - -	10.8	11.0	10.9	11.3	10.3	9.5
Wheat - - - - -	10.8	12.4	12.0	12.3	12.8	13.7
Soybeans- - - - -	7.9	7.2	10.2	15.0	13.9	22.3
Other crops - - - - -	9.9	5.4	5.4	3.4	4.0	2.1
Legume hay and pasture- - - - -	21.2	23.6	23.3	19.5	18.6	14.4
Nonlegume hay and pasture - - - -	18.7	17.0	13.3	10.8	9.9	7.8
Gross earnings per acre - - - - -	\$18.31	\$25.66	\$29.90	\$36.00	\$36.68	\$40.95
Gross expenses per acre - - - - -	8.72	10.32	11.45	13.40	12.79	12.72
Net earnings per acre - - - - -	\$ 9.59	\$15.34	\$18.45	\$22.60	\$23.89	\$28.23
Land tax per acre - - - - -	\$.71	\$.85	\$ 1.00	\$ 1.28	\$ 1.29	\$ 1.41

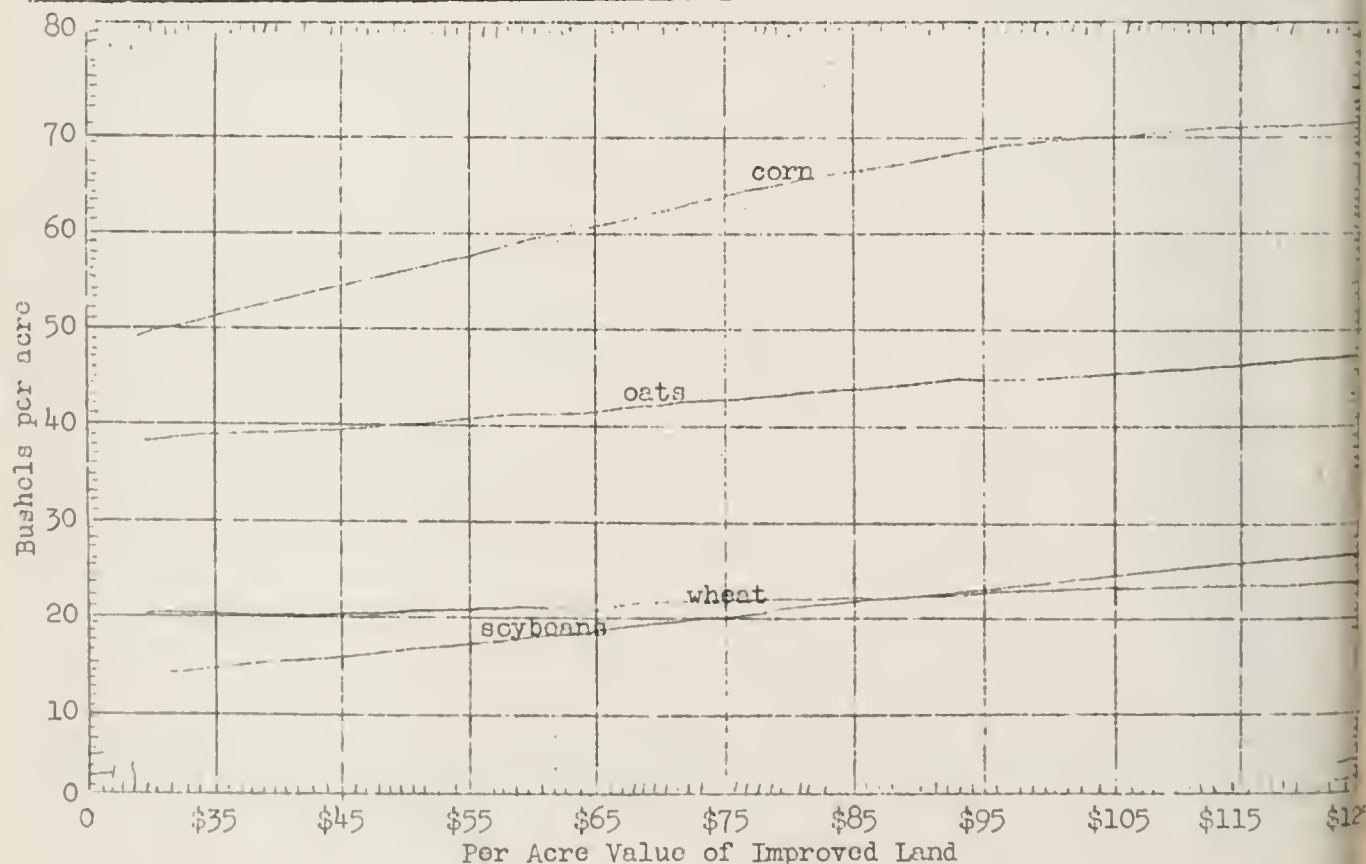


Fig. 1.--Average yields of corn, oats, wheat, and soybeans with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The standards for your farms (Table 2) are taken from Tables 3 to 6 and from Figure 1. They are classified as follows:

- Table 3 - Value of improved land.
 - Gross earnings, gross expenses, and net earnings per acre.
 - Value of improved land per acre.
 - All items in the land-use section.
 - Land tax per acre.
- Figure 1 - Value of improved land.
 - Yields for corn, oats, wheat, and soybeans.
- Table 4 - Source of income.
 - Feed fed per acre to productive livestock.
 - Returns per \$100 worth of feed fed.
 - Dairy returns per cow.
- Table 5 - Size of farm.
 - Value of improvements per acre.
 - Total months of labor.
 - Number of work horses.
 - Improvement cost per acre
- Table 6 - Size of farm and amount of feed fed per acre.
 - Horse and machinery cost per crop acre.
 - Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops increased as the value per acre for improved land increased from an average of \$35 to \$128 (Table 3). Likewise the percent of land area tillable, the net earnings per acre, and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, wheat, and soybeans increased as the land value increased (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value for improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1941

Item	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms - - - - -	85	26	125	19	37	70
Percent of income from prod. l.s.	37.1	89.0	86.2	92.9	53.2	73.9
Percent of income from crops - - -	54.6	3.0	4.9	6.6	35.0	16.6
<u>Investments</u>						
Total per farm- - - - -	\$30 714	\$22 365	\$25 898	\$54 574	\$22 669	\$26 348
Total per acre- - - - -	121	101	111	121	115	102
Land per acre - - - - -	81	54	65	69	74	58
Improvements per acre - - - - -	12	17	15	17	14	15
Machinery per acre- - - - -	8.84	8.40	7.98	6.77	8.01	7.75
<u>Earnings</u>						
Per farm						
Gross earnings - - - - -	\$ 7 871	\$ 6 631	\$ 7 166	\$13 933	\$ 5 760	\$ 7 150
Gross expenses - - - - -	2 822	3 277	2 649	5 588	2 326	2 871
Net earnings- - - - -	\$ 5 049	\$ 3 354	\$ 4 517	\$ 8 345	\$ 3 434	\$ 4 279
Per acre						
Gross earnings- - - - -	\$ 31.02	\$ 29.96	\$ 30.60	\$ 30.84	\$ 29.14	\$ 27.64
Gross expenses- - - - -	11.12	14.81	11.31	12.37	11.77	11.10
Net earnings- - - - -	\$ 19.90	\$ 15.15	\$ 19.29	\$ 18.47	\$ 17.37	\$ 16.54
Rate earned on investment - - -	16.4%	15.0%	17.4%	15.3%	15.1%	16.2%
Labor and management earnings -	\$ 4 106	\$ 2 849	\$ 3 823	\$ 6 222	\$ 2 903	\$ 3 573
<u>Size and Intensity</u>						
Acres per farm- - - - -	254	221	234	452	198	259
Percent of land area tillable -	86.1	78.4	75.8	78.0	85.8	76.7
Percent tillable land in grain-	71.7	49.7	58.8	59.6	62.6	55.6
Percent in hay and pasture- - -	24.2	46.8	37.9	35.5	33.8	40.2
Feed fed per acre to prod. l.s. \$	6.26	\$ 11.93	\$ 14.51	\$ 19.09	\$ 8.30	\$ 11.10
Months of labor per 100 crop A.	11.4	24.8	17.5	12.9	14.7	17.5
Total months of labor - - - - -	20.5	29.1	21.7	32.4	19.1	24.9
<u>Crop Yields per Acre</u>						
Corn, bu. - - - - -	65.3	55.7	64.1	69.0	62.9	61.7
Wheat, bu.- - - - -	22.7	22.2	22.6	21.8	18.9	22.5
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 196	\$ 231	\$ 188	\$ 153	\$ 200	\$ 192
Hog returns per litter- - - - -	140	140	142	172	143	151
Dairy returns per cow - - - - -	100	171	84	84	103	117
<u>Expense Factors</u>						
Labor cost per crop acre- - - -	\$ 6.19	\$ 13.29	\$ 9.52	\$ 7.11	\$ 7.72	\$ 9.24
Horse and machinery cost per crop acre - - - - -	5.12	7.91	6.35	6.26	5.70	6.07
Improvement cost per acre - - -	.97	1.62	1.17	1.19	1.22	1.10
Land tax per acre - - - - -	1.17	.91	.97	1.04	1.12	.97

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer should, however, use caution in interpreting the data in Table 4. For example, the fact that hog farms showed the largest rate earned on the investment for 1941 and that dairy farms showed the smallest does not mean that such a relationship will prevail over a long period of years. The relative profitableness of these enterprises in 1941 was due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed which will be necessary to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, in a comparison of crop yields for the various types of farming, the following items, which indicate that the grain farms were located on the better land, should be noted: (1) high value of land per acre; (2) large percent of land area tillable; (3) large percent of land in grain; (4) high yield of corn and wheat per acre; and (5) high land tax per acre.

Differences in expenses are highly significant for the six groups of farms. Labor input per 100 crop acres was highest on the dairy farms, where 24.8 months of labor were used, and lowest on the grain farms, where 11.4 months of labor were used. The dairy farmers evidently utilized a large amount of available labor to increase the size of their businesses without increasing the size of their farms.

The labor cost per crop acre ranged from \$6.19 on the grain farms to \$13.29 on the dairy farms; the horse and machinery cost per crop acre was highest on the dairy farms where it averaged \$7.91 and lowest on the grain farms, where it averaged \$5.12; and the improvement cost per acre averaged \$1.62 on the dairy farms and \$.97 on the grain farms.

Size of farm. When the farm records in Farming-Type Area 5 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 33 largest farms had labor and management earnings which averaged \$7,285 contrasted with \$2,139 for the 30 smallest farms. The rate earned on investment did not differ significantly for the various size groups.

The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the much higher gross and net earnings per acre, by the larger labor and capital input per acre, and by the larger value of feed fed per acre to productive livestock.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1941

Item	Total acres in farm					
	41 to 120	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	30	136	103	41	19	33
Acres per farm - - - - -	102	166	241	319	396	592
<u>Investments</u>						
Total per farm- - - - -	\$12 794	\$19 655	\$26 574	\$39 553	\$35 830	\$62 212
Total per acre- - - - -	125	119	110	124	90	105
Land per acre - - - - -	74	71	66	77	58	63
Improvements per acre - - - - -	18	17	15	15	10	14
Machinery per acre- - - - -	9.99	9.30	7.98	8.87	6.57	6.43
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 3 868	\$ 5 395	\$ 7 243	\$10 189	\$ 9 763	\$15 122
Gross expenses- - - - -	1 657	2 215	2 833	3 632	3 486	5 276
Net earnings - - - - -	\$ 2 211	\$ 3 180	\$ 4 410	\$ 6 557	\$ 6 277	\$ 9 846
Per acre						
Gross earnings- - - - -	\$ 37.77	\$ 32.56	\$ 30.00	\$ 31.94	\$ 24.66	\$ 25.57
Gross expenses- - - - -	16.18	13.37	11.73	11.39	8.81	8.92
Net earnings- - - - -	\$ 21.59	\$ 19.19	\$ 18.27	\$ 20.55	\$ 15.85	\$ 16.65
Rate earned on investment - - -	17.3%	16.2%	16.6%	16.6%	17.5%	15.8%
Labor and management earnings -	\$ 2 139	\$ 2 799	\$ 3 702	\$ 5 221	\$ 5 063	\$ 7 285
<u>Size and Intensity</u>						
Percent of land area tillable -	86.2	84.7	81.0	80.2	72.6	73.2
Percent tillable land in grain-	61.4	62.8	60.7	65.5	55.9	59.5
Percent in hay and pasture- - -	34.8	33.8	36.2	31.6	41.3	34.0
Feed fed per acre to prod. l.s.	\$ 12.73	\$ 11.54	\$ 11.48	\$ 12.02	\$ 8.73	\$ 12.62
Percent of income from prod.l.s.	66.3	69.2	68.7	68.2	69.1	78.8
Percent of income from crops- -	23.9	20.7	21.9	22.9	22.4	14.9
Months of labor per 100 crop A.	22.3	17.5	16.4	13.8	15.2	11.5
Total months of labor- - - - -	14.7	18.5	23.7	27.4	28.7	36.6
Number of work horses - - - - -	2.6	2.8	3.6	3.6	3.4	5.0
<u>Crop Yields per Acre</u>						
Corn, bu. - - - - -	68.6	61.8	64.9	65.2	58.9	65.9
Wheat, bu.- - - - -	23.2	21.5	22.5	22.0	22.2	22.5
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 209	\$ 205	\$ 188	\$ 188	\$ 202	\$ 163
Hog returns per litter- - - - -	146	147	139	144	155	144
Dairy returns per cow - - - - -	97	120	118	123	104	120
<u>Expense Factors</u>						
Labor cost per crop acre- - - -	\$ 12.41	\$ 9.46	\$ 8.80	\$ 7.92	\$ 7.30	\$ 6.10
Horse and machinery cost per crop acre - - - - -	7.02	6.30	5.86	5.71	6.38	5.51
Improvement cost per acre - - -	1.54	1.29	1.14	1.14	.89	1.00
Land tax per acre - - - - -	1.21	1.08	1.02	1.04	.93	.99

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 5, 1941

Acres per farm	Feed fed per acre			Feed fed per acre		
	Less than \$7.00	\$7.00 to \$10.99	\$11.00 or more	Less than \$7.00	\$7.00 to \$10.99	\$11.00 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
41 to 120	\$11.10	\$11.70	\$13.60	\$5.70	\$6.60	\$7.50
121 to 200	7.80	8.90	11.00	4.60	5.90	7.40
201 to 280	7.20	8.70	9.80	4.50	5.50	6.50
281 to 360	6.50	8.40	9.10	4.30	5.30	6.20
361 to 440	6.20	8.20	8.50	4.90	6.00	6.60
441 or more	5.00	6.00	6.80	4.10	4.50	5.80

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grain are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 5, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	362	316	315	318
<u>Capital Investments</u>					
Land- - - - -	\$	\$16 944	\$17 809	\$18 253	\$17 206
Farm improvements - - - - -		3 688	3 581	3 453	3 078
Horses- - - - -		310	374	407	448
Productive livestock: Cattle- - -		1 911	1 722	1 490	1 207
Hogs- - -		616	612	629	524
Sheep - - -		118	115	91	103
Poultry - -		85	85	102	102
<u>Total productive livestock- - -</u>	()	(2 730)	(2 534)	(2 312)	(1 936)
Feed and grain- - - - -		2 349	2 384	1 998	1 877
Machinery and equipment - - - -		1 812	1 831	1 775	1 521
Automobile (farm share) - - - -		204	168	173	163
<u>Total - - - - -</u>	\$	\$28 037	\$28 681	\$28 371	\$26 229
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ --	\$ --	\$ 1
Productive livestock: Cattle- - -		1 507	1 128	1 021	755
Dairy sales		689	522	432	466
Hogs- - -		2 655	1 335	1 260	1 416
Sheep - - -		123	92	77	57
Poultry - -		104	65	63	66
Egg sales -		178	116	115	136
<u>Total productive livestock- - -</u>	()	(5 256)	(3 258)	(2 968)	(2 896)
Farm products used in household -		283	244	256	279
Feed and grain - - - - -		1 532	839	1 289	710
Labor off farm - - - - -		39	43	52	58
Miscellaneous - - - - -		10	13	18	8
AAA payments - - - - -		333	426	454	171
<u>Total - - - - -</u>	\$	\$ 7 453	\$ 4 823	\$ 5 037	\$ 4 123
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 286	\$ 240	\$ 209	\$ 189
Horses- - - - -		23	18	10	--
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - -		616	521	497	398
Automobile (farm share) - - - -		113	98	104	94
Hired labor - - - - -		421	370	379	318
Miscellaneous - - - - -		34	25	33	25
Crop expense - - - - -		142	124	133	118
Livestock expense - - - - -		70	54	61	52
Taxes - - - - -		296	294	289	256
<u>Total - - - - -</u>	\$	\$ 2 001	\$ 1 744	\$ 1 715	\$ 1 450
Receipts less expenses- - - - -	\$	\$ 5 452	\$ 3 079	\$ 3 322	\$ 2 673
Family labor- - - - -		248	234	245	229
Returns for labor, capital, mgt.	\$	\$ 5 204	\$ 2 845	\$ 3 077	\$ 2 444
Operator's labor- - - - -		602	536	524	526
Net earnings per farm - - - -	\$	\$ 4 602	\$ 2 309	\$ 2 553	\$ 1 918
<u>Rate Earned on Investment</u> - - - -		16.4%	8.1%	9.0%	7.3%
Interest on investment- - - - -	\$	\$ 1 402	\$ 1 434	\$ 1 418	\$ 1 312
Labor and Management Earnings - -		3 802	1 411	1 659	1 132
Nonfarm income- - - - -	\$	\$ 93	\$ 106	\$ 113	\$ 107

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA SIX St. Louis Dairy and Wheat Area

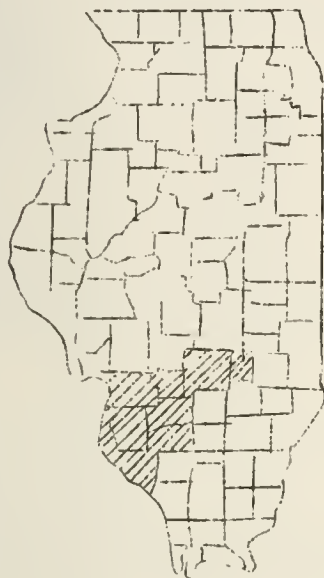
DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON THREE HUNDRED SEVEN FARMS IN FARMING-TYPE AREA 6, 1941

By P. E. Johnston, J. B. Cunningham, and K. E. Kinsinger^{1/}

Farm earnings of accounting farms in Farming-Type Area 6 were much higher in 1941 than in 1940. The average net earnings per acre were \$10.27 in 1941, \$8.15 in 1940, \$7.96 in 1939, and \$5.11 in 1938. The items considered in calculating the net earnings included: inventory changes; cash receipts; cash expenses; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940 (Table 1).



 Farming-Type Area 6
 Wheat, Dairy, and Poultry

Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, especially for feed and machinery, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all farms in the area, the crop yields were above the average, and the farm operators were more skillful than the average in the organization and operation of their farms. Therefore the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his business operations in order to locate the strong and weak places in the management of his farm. The data in Tables 1 to 7 and Figure 1 are particularly well adapted for such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.

^{1/} W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

T. W. May, Madison County
 E. C. Secor, Randolph County
 W. H. Tammeus, Bond County
 B. W. Tillman, St. Clair County
 C. S. Cutright, Effingham County

O. W. Hertz, Washington County
 C. E. Twigg, Clinton County
 E. S. Amrine, Monroe County
 J. B. Turner, Fayette County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 6, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	307	255	271	289
Acres per farm - - - - -		213	200	202	208
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 66	\$ 65	\$ 54	\$ 96
Livestock- - - - -		333	104	142	52
Feed and grain - - - - -		275	217	332	-135
Machinery and equipment- - - - -		179	119	56	161
Automobile (farm share)- - - - -		26	9	13	8
Total - - - - -	\$	\$ 879	\$ 514	\$ 597	\$ 182
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 5	\$ 5	\$ 8	\$ 9
Horses - - - - -		48	39	45	56
Productive livestock: Cattle - - - - -		773	603	449	476
Dairy sales		1 233	915	841	874
Hogs - - - - -		886	531	584	601
Sheep- - - - -		68	49	38	51
Poultry- - - - -		112	102	115	117
Egg sales- - - - -		317	236	225	282
Total productive livestock - - - - -	()	(3 389)	(2 436)	(2 252)	(2 401)
Feed and grain - - - - -		987	853	852	701
Machinery and equipment- - - - -		203	208	170	189
Automobile (farm share)- - - - -		37	28	28	30
Labor off farm - - - - -		32	38	50	63
Miscellaneous- - - - -		15	26	15	10
AAA payments - - - - -		131	314	229	94
Total- - - - -	\$	\$ 4 847	\$ 3 947	\$ 3 649	\$ 3 553
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 273	\$ 251	\$ 219	\$ 258
Horses - - - - -		23	24	28	47
Productive livestock: Cattle - - - - -		308	261	248	173
Hogs - - - - -		67	40	51	63
Sheep- - - - -		7	7	5	5
Poultry- - - - -		32	27	28	29
Total productive livestock - - - - -	()	(414)	(335)	(332)	(270)
Feed and grain - - - - -		616	399	412	364
Machinery and equipment- - - - -		886	715	570	693
Automobile (farm share)- - - - -		160	116	114	121
Hired labor- - - - -		275	236	229	204
Miscellaneous- - - - -		26	23	23	25
Crop expense - - - - -		118	85	84	95
Livestock expense- - - - -		45	39	42	34
Taxes- - - - -		181	167	163	156
Total- - - - -	\$	\$ 3 017	\$ 2 390	\$ 2 216	\$ 2 267
<u>Summary</u>					
Cash balance - - - - -	\$	\$ 1 830	\$ 1 557	\$ 1 433	\$ 1 286
Farm products used in household- - - - -		282	250	264	290
Total inventory change - - - - -		879	514	597	182
Receipts less expenses - - - - -	\$	\$ 2 991	\$ 2 321	\$ 2 294	\$ 1 758
Total unpaid labor - - - - -		804	689	688	697
Net earnings per farm- - - - -	\$	\$ 2 187	\$ 1 632	\$ 1 606	\$ 1 061
Net earnings per acre- - - - -	\$	\$ 10.27	\$ 8.15	\$ 7.96	\$ 5.11

Inventory changes. The year 1941 was the sixth consecutive year of increasing inventories. The increases ranged from \$879 in 1941 to \$132 in 1938 (Table 1). The largest increases in 1941 were for livestock and feed and grain. The average amounts of grain on hand in Area 6 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	1 010	965
Oats	362	377
Wheat	428	446
Soybeans	42	46

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$1,830, a larger margin than for any other year during the past four years. The cash balance, the difference between cash receipts and expenses, is the amount of money which was available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$45 per month in 1941 and at \$40 per month in each of the three previous years.

The net earnings per farm averaged \$2,187 in 1941 compared with \$1,632 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 6. For example, 40 farms earned less than 3 percent on their investment, with an average rate earned of 2.7 percent; but 34 farms earned 20 percent or more, with an average rate earned of 24.6 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a gain of \$21 for labor and management earnings contrasted with a gain of \$3,511 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 5.00	40	2.7	217	\$18 910	\$3 193	\$ 511	\$ 21
5.00 to 9.99	75	7.8	232	19 517	4 029	1 530	1 057
10.00 to 14.99	103	12.6	206	18 606	4 725	2 342	1 889
15.00 to 19.99	55	17.0	210	17 799	5 497	3 031	2 646
20.00 or more	34	24.6	192	15 345	6 293	3 774	3 511

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 6, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	11.9%	11.9%
Number of farms- - - - -	--	--	307
Acres in farm - - - - -	_____	213	213
Acres tillable - - - - -	_____	171	171
Acres in crops - - - - -	_____	127	127
Gross earnings per acre- - - - -	\$ _____	\$ _____ a/	\$ 20.97
Total expenses per acre- - - - -	_____	_____	10.70
Net earnings per acre- - - - -			10.27
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 46	\$ 46
Value of improved land per acre- - - - -	_____	_____ a/	50
Value of improvements per acre - - - - -	_____	_____ e/	13
Total investment per acre- - - - -		86	86
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ a/	80.3
Percent of tillable land in:			
Corn - - - - -	_____	_____	16.7
Oats - - - - -	_____	_____	9.1
Wheat- - - - -	_____	_____	22.0
Soybeans - - - - -	_____	_____	3.4
Other crops- - - - -	_____	_____	12.3
Legume hay and pasture - - - - -	_____	_____	24.5
Nonlegume hay and pasture- - - - -	_____	_____	12.0
<u>Crop Yields</u>			
Corn - - - - -	_____	_____ b/	43.3
Oats - - - - -	_____	_____	36.1
Wheat- - - - -	_____	_____	20.7
Soybeans - - - - -	_____	10.3	10.3
<u>Livestock Factors</u>			
Value of feed fed to prod. l.s.- - - - -	\$ _____	\$1 828	\$1 828
Feed fed per acre to prod. l.s.- - - - -	_____	_____ c/	8.58
Returns per \$100 worth of feed fed - - - - -	_____	_____	196
Poultry returns per hen- - - - -	_____	3.11	3.11
Number of litters farrowed - - - - -	_____	8.3	8.3
Number of pigs weaned per litter - - - - -	_____	6.6	6.6
Returns per litter farrowed- - - - -	\$ _____	\$ 146	\$ 146
Average number of cows milked- - - - -	_____	9.3	9.3
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ c/	\$ 140
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - - - - -	\$ _____	\$ _____ d/	\$ 6.07
Labor cost per crop acre - - - - -	_____	_____	8.24
Total months of labor- - - - -	_____	_____ e/	23.4
Number of work horses- - - - -	_____	_____	3.6
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$.95
Land tax per acre- - - - -	_____	_____ a/	.73

Source of Standards:

a/ Table 3, value of improved land.

b/ Fig. 1, value of improved land.

c/ Table 4, source of income.

d/ Table 6, size of farm and value of feed fed.

e/ Table 5, size of farm.

-5-

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 6, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings							Total expense per acre	Factors that affect expenses		
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked		Horse and machinery cost per crop acre
				Corn, bu.	Oats, bu.	Wheat, bu.							Labor cost per crop acre
													Improvement cost per acre
27	363								4.60	196			
24	333								4.30	186			
21	303								4.00	176			
18	273								3.70	166			
15	243								3.40	156			
11.9	213								3.11	146			
9	183								2.80	136			
6	153								2.50	126			
3	123								2.20	116			
0	93								1.90	106			
--	63								1.60	96			
3%	30	\$3	3%	4 bu.	4 bu.	2 bu.	\$2	\$20	\$.30	\$10	\$10	\$1	\$.20

Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 6, 1941

Item	Value of improved land				
	\$23 to \$37	\$38 to \$52	\$53 to \$67	\$68 to \$82	\$83 to \$102
Average value of improved land- - -	\$32	\$45	\$60	\$75	\$93
Number of farms - - - - -	69	106	61	45	18
Acres per farm - - - - -	234	215	224	169	180
Percent of land area tillable - - -	80.2	79.6	78.6	83.9	83.9
Percent of tillable land in:					
Corn- - - - -	13.6	16.2	19.5	19.4	17.2
Oats- - - - -	8.7	9.4	9.4	8.8	5.5
Wheat - - - - -	17.4	22.0	21.6	29.8	32.8
Soybeans- - - - -	4.5	3.0	3.4	2.2	3.2
Other crops - - - - -	14.6	12.8	10.4	8.1	16.3
Legume hay and pasture- - - - -	22.2	24.8	28.2	22.3	19.6
Nonlegume hay and pasture - - - -	19.0	11.8	7.5	9.4	5.4
Gross earnings per acre - - - - -	\$16.77	\$19.55	\$23.13	\$27.52	\$30.50
Total expenses per acre - - - - -	8.72	10.08	11.14	13.85	16.86
Net earnings per acre - - - - -	\$ 8.05	\$ 9.47	\$11.99	\$13.67	\$13.64
Land tax per acre - - - - -	\$.56	\$.68	\$.78	\$.97	\$ 1.14

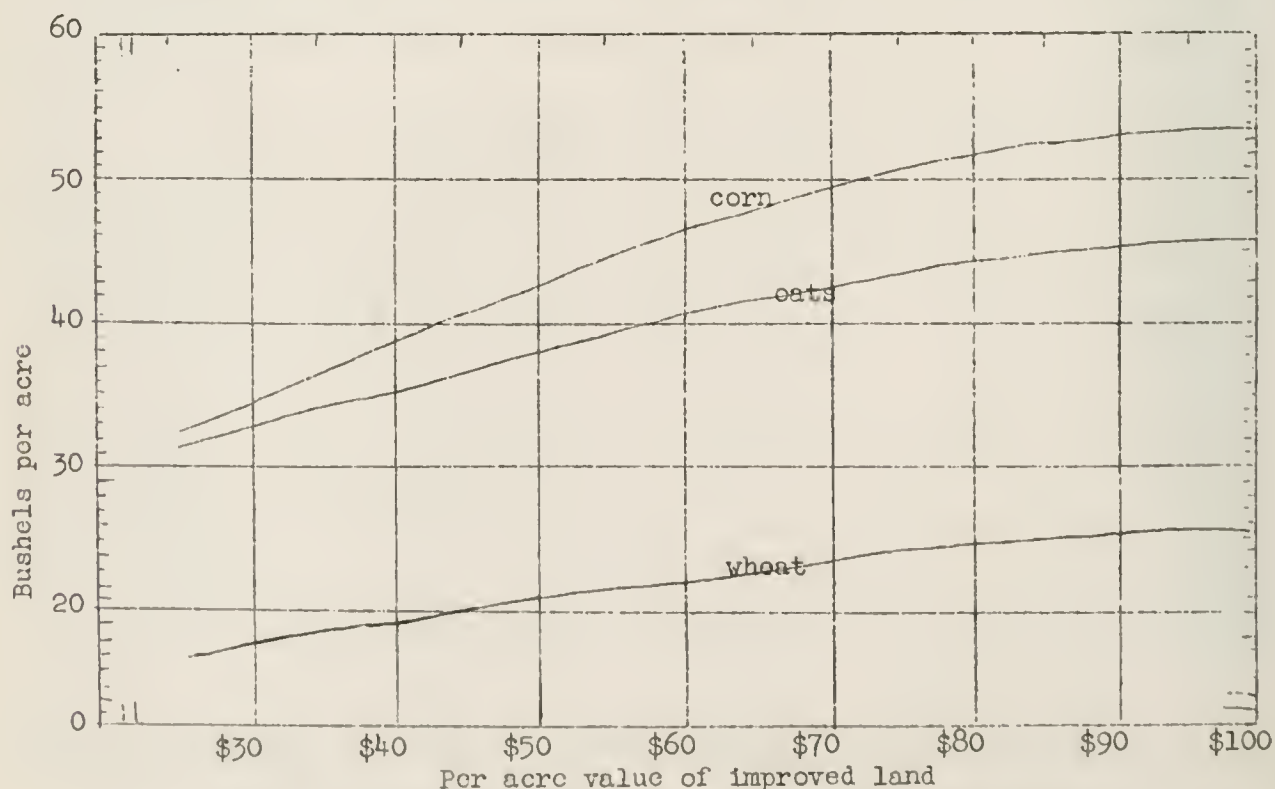


Fig. 1.--Average yields of corn, oats, and wheat with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farm" (Table 2) are taken from Tables 3 to 6 and from Figure 1. They are classified as follows:

- Table 3 - Value of improved land.
Gross earnings, total expenses, and net earnings per acre.
Value of improved land per acre.
All items in the land-use section.
Land tax per acre.
- Figure 1 - Value of improved land.
Value of improved land per acre.
Yields for corn, oats, and wheat.
- Table 4 - Source of income.
Feed fed per acre to productive livestock.
Returns per \$100 worth of feed fed.
Dairy returns per cow.
- Table 5 - Size of farm.
Value of improvements per acre.
Total months of labor.
Number of work horses.
Improvement cost per acre.
- Table 6 - Size of farm and amount of feed fed per acre.
Horse and machinery cost per crop acre.
Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops and "other crops" increased from 58.8 to 75.0 as the value per acre for improved land increased from an average of \$32 to \$93 (Table 3). Likewise the percent of land area tillable, the gross earnings per acre, and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and wheat increased as the value of improved land increased (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value for improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1941

Item	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms - - - - -	39	86	30	10	38	104
Percent of income from prod. l.s.	34.9	82.6	91.6	92.3	54.6	75.6
Percent of income from crops- - -	56.7	7.9	--	--	31.8	13.0
<u>Investments</u>						
Total per farm- - - - -	\$17 434	\$19 207	\$18 850	\$28 024	\$16 752	\$17 532
Total per acre- - - - -	86	93	85	81	80	84
Land per acre - - - - -	53	47	44	42	47	44
Improvements per acre - - - - -	10	16	13	12	11	13
Machinery per acre- - - - -	9.11	9.88	8.53	6.27	7.91	8.42
<u>Earnings</u>						
Per farm						
Gross earnings - - - - -	\$ 4 230	\$ 4 790	\$ 5 877	\$ 8 036	\$ 3 619	\$ 4 108
Gross expenses - - - - -	2 157	2 510	3 045	3 889	1 962	2 136
Net earnings - - - - -	\$ 2 073	\$ 2 280	\$ 2 832	\$ 4 147	\$ 1 657	\$ 1 972
Per acre						
Gross earnings- - - - -	\$ 20.84	\$ 23.20	\$ 26.38	\$ 23.21	\$ 17.31	\$ 19.76
Gross expenses- - - - -	10.63	12.16	13.67	11.23	9.38	10.27
Net earnings- - - - -	\$ 10.21	\$ 11.04	\$ 12.71	\$ 11.98	\$ 7.93	\$ 9.49
Rate earned on investment - - -	11.9%	11.9%	15.0%	14.8%	9.9%	11.2%
Labor and management earnings -	\$ 1 703	\$ 1 815	\$ 2 353	\$ 3 191	\$ 1 328	\$ 1 578
<u>Size and Intensity</u>						
Acres per farm- - - - -	203	206	223	346	209	208
Percent of land area tillable -	84.4	79.3	74.7	76.2	84.2	80.5
Percent tillable land in grain-	63.5	51.7	52.8	38.5	57.7	55.6
Percent in hay and pasture- - -	27.0	40.6	36.5	49.6	32.4	36.3
Feed fed per acre to prod. l.s.	\$ 4.29	\$ 9.52	\$ 13.85	\$ 10.53	\$ 5.60	\$ 8.54
Months of labor per 100 crop A.	16.3	20.0	18.4	23.5	16.4	18.3
Total months of labor - - - - -	22.4	24.5	22.1	33.6	21.8	22.9
<u>Crop Yields per Acre</u>						
Corn, bu. - - - - -	47.4	41.7	47.7	41.8	40.9	41.7
Wheat, bu.- - - - -	23.6	20.3	20.2	21.3	19.9	19.9
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 190	\$ 212	\$ 182	\$ 210	\$ 189	\$ 187
Hog returns per litter- - - - -	127	132	162	156	140	142
Dairy returns per cow - - - - -	114	167	130	90	93	122
<u>Expense Factors</u>						
Labor cost per crop acre- - - -	\$ 7.52	\$ 9.17	\$ 7.92	\$ 10.52	\$ 7.18	\$ 8.03
Horse and machinery cost						
per crop acre - - - - -	5.14	7.18	6.72	7.36	4.90	5.67
Improvement cost per acre - - -	.53	1.13	1.25	.85	.73	.96
Land tax per acre - - - - -	.80	.69	.70	.64	.74	.75

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer should, however, use caution in interpreting the data in Table 4. For example, the fact that cattle farms showed 14.8 percent earned on the investment for 1941 and that ~~hog~~ ^{general} farms showed 11.9 percent does not mean that such a relationship will prevail over a long period of years. The relative profitability of these enterprises in 1941 was due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that there is a wide variation in the returns per \$100 worth of feed fed which will be necessary to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, in a comparison of crop yields for the various types of farming, the following items, which indicate that the grain farms were located on the better land should be noted: (1) high value of land per acre; (2) large percent of land area tillable; (3) large percent of land in grain; (4) high yield of corn and wheat per acre; and (5) high land tax per acre.

In using Table 4, consideration should also be given to the fact that labor and horse and machinery costs per crop acre are usually lower on cattle farms than on either dairy or hog farms. In this study, however, excessively high costs on a few cattle farms had a big effect on a small sample (10 farms).

Exclusive of the cattle farms, the labor cost per crop acre ranged from \$9.17 on the dairy farms to \$7.18 on the general farms with the least livestock. The horse and machinery cost per crop acre was highest on the dairy farms, where it averaged \$7.36, and lowest on the general farms with the least livestock, where it averaged \$4.90. The improvement cost per acre was highest on the hog farms, where it averaged \$1.25, and lowest on the grain farms, where it averaged \$.53. Labor input per 100 crop acres was high on the dairy farms, where 20.0 months of labor were used, and low on the grain farms, where 16.3 months of labor were used.

Size of farm. When the farm records in Farming-Type Area 6 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 85 farms ranging in size from 201 to 280 acres had labor and management earnings which averaged \$1,965 contrasted with \$1,309 for the 40 smallest farms. The smaller farms had higher investments per acre for land, improvements, machinery, and total investment. The rate earned on investment was higher for farms smaller than 280 acres than for farms larger than 360 acres.

The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the much higher gross and net earnings

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1941

Item	Total acres in farm				
	Less than 121	121 to 200	201 to 280	281 to 360	361 or more
Number of farms - - - - -	40	128	85	38	16
Acres per farm- - - - -	104	166	237	320	481
<u>Investments</u>					
Total per farm- - - - -	\$11 534	\$16 210	\$20 062	\$23 682	\$30 994
Total per acre- - - - -	111	98	85	74	64
Land per acre - - - - -	55	51	46	41	37
Improvements per acre - - - - -	20	15	13	11	9
Machinery per acre- - - - -	11.70	10.40	8.79	6.68	5.67
<u>Earnings</u>					
Per farm					
Gross earnings- - - - -	\$ 2 995	\$ 4 094	\$ 4 901	\$ 5 408	\$ 6 619
Gross expenses- - - - -	1 584	2 108	2 424	2 735	3 577
Net earnings - - - - -	\$ 1 411	\$ 1 986	\$ 2 477	\$ 2 673	\$ 3 042
Per acre					
Gross earnings- - - - -	\$ 28.80	\$ 24.71	\$ 20.67	\$ 16.90	\$ 13.76
Gross expenses- - - - -	15.23	12.72	10.22	8.55	7.44
Net earnings - - - - -	\$ 13.57	\$ 11.99	\$ 10.45	\$ 8.35	\$ 6.32
Rate earned on investment - - - -	12.2%	12.2%	12.4%	11.3%	9.8%
Labor and management earnings - -	\$ 1 309	\$ 1 681	\$ 1 965	\$ 1 937	\$ 1 962
<u>Size and Intensity</u>					
Percent of land area tillable - -	83.8	82.6	80.0	79.9	73.2
Percent tillable land in grain- -	54.8	56.9	56.2	55.1	42.9
Percent in hay and pasture- - -	39.1	35.4	36.0	35.6	41.6
Feed fed per acre to prod. l.s. -	\$ 10.74	\$ 9.86	\$ 8.34	\$ 7.54	\$ 6.19
Percent of income from prod. l.s.	74.6	74.6	72.4	74.2	92.1
Percent of income from crops- - -	13.6	15.1	17.5	14.8	--
Months of labor per 100 crop A. -	26.1	19.7	17.1	16.0	16.7
Total months of labor- - - - -	18.2	21.4	24.6	29.0	33.1
Number of work horses - - - - -	3.2	3.5	3.7	4.5	3.7
<u>Crop Yields per Acre</u>					
Corn, bu. - - - - -	46.5	44.1	44.1	41.9	35.9
Wheat, bu.- - - - -	22.7	21.6	21.0	18.5	18.5
<u>Livestock Returns</u>					
Per \$100 feed fed - - - - -	\$ 214	\$ 200	\$ 191	\$ 177	\$ 213
Hog returns per litter- - - - -	150	151	138	146	134
Dairy returns per cow - - - - -	149	141	133	144	156
<u>Expense Factors</u>					
Labor cost per crop acre- - - - -	\$ 12.02	\$ 8.86	\$ 7.51	\$ 7.13	\$ 7.43
Horse and machinery cost per crop acre - - - - -	7.09	6.34	5.98	5.08	6.45
Improvement cost per acre - - - -	1.24	1.20	.84	.74	.69
Land tax per acre - - - - -	.90	.80	.72	.66	.55

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per acre, by the larger proportion of total land tillable, by the higher land values, by the larger amount of feed fed per acre to productive livestock, and by the substantially higher crop yields.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 6, 1941

Acres per farm	Feed fed per acre			Feed fed per acre		
	Less	\$7.00	\$11.00	Less	\$7.00	\$11.00
	than	to	or	than	to	or
	\$7.00	\$10.99	more	\$7.00	\$10.99	more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 121	\$11.00	\$11.70	\$12.80	\$5.90	\$6.80	\$7.90
121 to 200	8.20	8.70	10.20	5.30	6.20	7.70
201 to 280	6.80	7.80	8.70	4.90	6.00	7.50
281 to 360	6.30	6.80	8.20	4.20	5.70	6.70

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grains are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 6, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	307	255	271	289
<u>Capital Investments</u>					
Land- - - - -	\$	\$ 9 811	\$ 9 614	\$ 9 851	\$ 9 806
Farm improvements - - - - -		2 830	2 725	2 690	2 659
Horses- - - - -		362	423	451	485
Productive livestock: Cattle- - -		1 325	1 148	972	925
Hogs- - -		244	270	279	274
Sheep - - -		55	45	37	65
Poultry - -		133	133	155	153
Total productive livestock- - -	()	(1 757)	(1 596)	(1 443)	(1 417)
Feed and grain- - - - -		1 742	1 594	1 302	1 521
Machinery and equipment - - - -		1 686	1 588	1 508	1 370
Automobile (farm share) - - - -		175	144	143	148
Total - - - - -	\$	\$18 363	\$17 684	\$17 388	\$17 406
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle- - -		644	487	389	378
Dairy sales		1 233	915	841	874
Hogs- - -		993	473	524	543
Sheep - - -		68	49	31	23
Poultry - -		106	84	73	96
Egg sales -		317	236	225	282
Total productive livestock- - -	()	(3 361)	(2 244)	(2 083)	(2 196)
Farm products used in household -		282	250	264	290
Feed and grain - - - - -		646	671	772	202
Labor off farm - - - - -		32	38	50	58
Miscellaneous - - - - -		15	26	15	9
AAA payments- - - - -		131	314	229	95
Total - - - - -	\$	\$ 4 467	\$ 3 543	\$ 3 413	\$ 2 850
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 202	\$ 181	\$ 157	\$ 153
Horses- - - - -		28	24	4	4
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - -		504	388	344	344
Automobile (farm share) - - - -		97	79	73	83
Hired labor - - - - -		275	236	229	199
Miscellaneous - - - - -		26	23	23	24
Crop expense- - - - -		118	85	84	95
Livestock expense - - - - -		45	39	42	34
Taxes - - - - -		181	167	163	156
Total - - - - -	\$	\$ 1 476	\$ 1 222	\$ 1 119	\$ 1 092
Receipts less expenses- - - - -	\$	\$ 2 991	\$ 2 321	\$ 2 294	\$ 1 758
Family labor- - - - -		316	255	258	277
Returns for labor, capital, mgt.	\$	\$ 2 675	\$ 2 066	\$ 2 036	\$ 1 481
Operator's labor- - - - -		488	434	430	420
Net earnings per farm - - - - -	\$	\$ 2 187	\$ 1 632	\$ 1 606	\$ 1 061
Rate Earned on Investment - - - -	%	11.9%	9.2%	9.2%	6.1%
Interest on investment- - - - -	\$	\$ 918	\$ 884	\$ 869	\$ 870
Labor and Management Earnings - - -		1 757	1 182	1 167	611
Nonfarm income- - - - -	\$	\$ 106	\$ 92	\$ 111	\$ 134

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA SEVEN South Central Mixed Farming Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 7, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	121	98	103	96
Acres per farm - - - - -	_____	247	248	227	216
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$ _____	\$ 61	\$ 151	\$ 56	\$ 75
Livestock- - - - -	_____	325	9	121	42
Feed and grain - - - - -	_____	353	137	138	-21
Machinery and equipment- - - - -	_____	99	72	72	137
Automobile (farm share)- - - - -	_____	27	15	20	-4
Total - - - - -	\$ _____	\$ 865	\$ 384	\$ 407	\$ 229
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$ _____	\$ 2	\$ 14	\$ 2	\$ 3
Horses - - - - -	_____	64	75	65	73
Productive livestock: Cattle - - -	_____	729	594	632	687
Dairy sales- - - - -	_____	370	290	316	285
Hogs - - - - -	_____	1 095	692	694	766
Sheep- - - - -	_____	124	110	57	81
Poultry- - - - -	_____	114	104	101	123
Egg sales- - - - -	_____	262	230	207	244
Total productive livestock - - - -	(_____)	(2 694)	(2 020)	(2 007)	(2 186)
Feed and grain - - - - -	_____	763	530	495	395
Machinery and equipment- - - - -	_____	162	127	109	84
Automobile (farm share)- - - - -	_____	45	41	27	15
Labor off farm - - - - -	_____	34	45	39	32
Miscellaneous- - - - -	_____	20	14	17	7
AAA payments - - - - -	_____	168	226	179	134
Total- - - - -	\$ _____	\$ 3 952	\$ 3 092	\$ 2 940	\$ 2 929
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$ _____	\$ 258	\$ 311	\$ 215	\$ 196
Horses - - - - -	_____	17	33	49	30
Productive livestock: Cattle - - -	_____	217	178	255	294
Hogs - - - - -	_____	64	39	58	60
Sheep- - - - -	_____	21	14	16	18
Poultry- - - - -	_____	31	24	24	27
Total productive livestock - - - -	(_____)	(333)	(255)	(353)	(399)
Feed and grain - - - - -	_____	487	352	335	348
Machinery and equipment- - - - -	_____	676	498	474	481
Automobile (farm share)- - - - -	_____	170	125	123	81
Hired labor- - - - -	_____	239	161	160	172
Miscellaneous- - - - -	_____	22	16	18	20
Crop expense - - - - -	_____	143	102	84	93
Livestock expense- - - - -	_____	27	24	28	28
Taxes- - - - -	_____	164	148	132	144
Total- - - - -	\$ _____	\$ 2 536	\$ 2 025	\$ 1 971	\$ 1 992
<u>Summary</u>					
Cash balance - - - - -	\$ _____	\$ 1 416	\$ 1 067	\$ 969	\$ 937
Farm products used in household- -	_____	292	244	254	268
Total inventory change - - - - -	_____	865	384	407	229
Receipts less expenses - - - - -	\$ _____	\$ 2 573	\$ 1 695	\$ 1 630	\$ 1 434
Total unpaid labor - - - - -	_____	678	618	654	632
Net earnings per farm- - - - -	\$ _____	\$ 1 895	\$ 1 077	\$ 976	\$ 802
Net earnings per acre- - - - -	\$ _____	\$ 7.68	\$ 4.35	\$ 4.30	\$ 3.71

Inventory changes. The year 1941 was the ninth consecutive year of increasing inventories. The increases for the past four years ranged from \$865 in 1941 to \$229 in 1938 (Table 1). The largest increases in 1941 were for livestock and feed and grain. The average amounts of grain on hand in Area 6 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	933	1 029
Oats	191	270
Wheat	73	103
Soybeans	33	50

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$1 416, a larger margin than for any other year during the past four years. The cash balance, the difference between cash receipts and expenses, is the amount of money which is available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$45 per month in 1941 and at \$40 per month in each of the three previous years.

The net earnings per farm averaged \$1 895 in 1941 compared with \$1 077 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 7. For example, 16 farms earned less than five percent on their investment, with an average rate earned of 1.7 percent; but 21 farms earned 20 percent or more, with an average rate earned of 24.1 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$45 for labor and management earnings contrasted with \$3 031 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 5.0	16	1.7	184	\$10 976	\$2 517	\$ 188	\$ 45
5.0 to 9.9	23	7.3	254	14 392	3 337	1 056	795
10.0 to 14.9	34	12.1	258	13 377	3 498	1 615	1 385
15.0 to 19.9	27	17.1	273	17 442	3 425	2 980	2 616
20.0 or more	21	24.1	235	13 200	5 051	3 177	3 031

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 7, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	13.4%	13.4%
Number of farms- - - - -	--	--	121
Acres in farm- - - - -	_____	247	247
Acres tillable - - - - -	_____	202	202
Acres in crops - - - - -	_____	134	134
Gross earnings per acre- - - - -	\$ _____	\$ _____ a/	\$ 15.75
Gross expenses per acre- - - - -	_____	_____	8.07
Net earnings per acre- - - - -	\$ _____	\$ _____	\$ 7.68
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 30	\$ 30
Value of improved land per acre- - - - -	_____	_____ a/	32
Value of improvements per acre - - - - -	_____	_____ e/	9
Total investment per acre- - - - -	_____	57	57
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ a/	81.9
Percent of tillable land in:			
Corn - - - - -	_____	_____	19.4
Oats - - - - -	_____	_____	5.8
Wheat- - - - -	_____	_____	9.7
Soybeans - - - - -	_____	_____	4.1
Other crops- - - - -	_____	_____	11.1
Legume hay and pasture - - - - -	_____	_____	23.7
Nonlegume hay and pasture- - - - -	_____	_____	26.2
<u>Crop Yields</u>			
Corn - - - - -	_____	_____ b/	38.9
Oats - - - - -	_____	_____	32.2
Wheat- - - - -	_____	_____	20.5
Soybeans - - - - -	_____	11.1	11.1
<u>Livestock Factors</u>			
Value of feed fed to prod. l. s. - - - - -	\$ _____	\$1 547	\$1 547
Feed fed per acre to prod. l. s. - - - - -	_____	_____ c/	6.27
Returns per \$100 worth of feed fed - - - - -	_____	_____	192
Poultry returns per hen- - - - -	_____	3.36	3.36
Number of litters farrowed - - - - -	_____	9.8	9.8
Number of pigs weaned per litter - - - - -	_____	6.8	6.8
Returns per litter farrowed- - - - -	\$ _____	\$ 150	\$ 150
Average number of cows milked- - - - -	_____	5.3	5.3
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ c/	\$ 88
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - - - - -	\$ _____	\$ _____ d/	\$ 4.69
Labor cost per crop acre - - - - -	_____	_____	6.60
Total months of labor- - - - -	_____	_____ e/	19.5
Number of work horses- - - - -	_____	_____	2.8
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$.79
Land tax per acre- - - - -	_____	_____ a/	.56

Source of Standards:

a/ Table 3, value of improved land.

b/ Fig. 1, value of improved land.

c/ Table 4, source of income.

d/ Table 6, size of farm and value or feed fed.

e/ Table 5, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 7, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Gross expense per acre	Factors that affect expenses		
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked		Horse and machinery cost per crop acre	Labor cost per crop acre	Improvement cost per acre
				Corn, bu.	Oats, bu.	Wheat, bu.									
28.4	497								4.86	200					
25.4	447								4.56	190					
22.4	397								4.26	180					
19.4	347								3.96	170					
16.4	297								3.66	160					
13.4	247								3.36	150					
10.4	197								3.06	140					
7.4	147								2.76	130					
4.4	97								2.46	120					
1.4	47								2.16	110					
--	--								1.86	100					
3%	50	\$3	3%	4	4	2	\$2	\$20	\$.30	\$10	\$10	\$1	\$.50	\$1	\$.20

*Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 7, 1941

Item	Value of improved land			
	\$13 to \$22	\$23 to \$32	\$33 to \$42	\$43 to \$80
Average value of improved land- - -	\$20	\$27	\$37	\$55
Number of farms - - - - -	27	42	29	23
Acres per farm- - - - -	273	261	217	229
Percent of land area tillable - - -	83.1	81.5	84.1	78.5
Percent of tillable land in:				
Corn- - - - -	17.8	16.0	20.6	27.1
Oats- - - - -	7.3	5.6	5.9	6.3
Wheat - - - - -	7.8	7.5	11.3	12.9
Soybeans- - - - -	4.8	2.4	5.4	5.0
Other crops - - - - -	11.5	12.7	11.4	6.9
Legume hay and pasture- - - - -	14.7	27.6	24.6	21.1
Nonlegume hay and pasture - - - -	36.1	28.2	20.8	20.7
Gross earnings per acre - - - - -	\$11.98	\$13.57	\$18.41	\$22.38
Gross expenses per acre - - - - -	<u>6.57</u>	<u>7.45</u>	<u>9.37</u>	<u>9.92</u>
Net earnings per acre - - - - -	\$ 5.41	\$ 6.12	\$ 9.04	\$12.46
Land tax per acre - - - - -	\$.49	\$.48	\$.64	\$.73

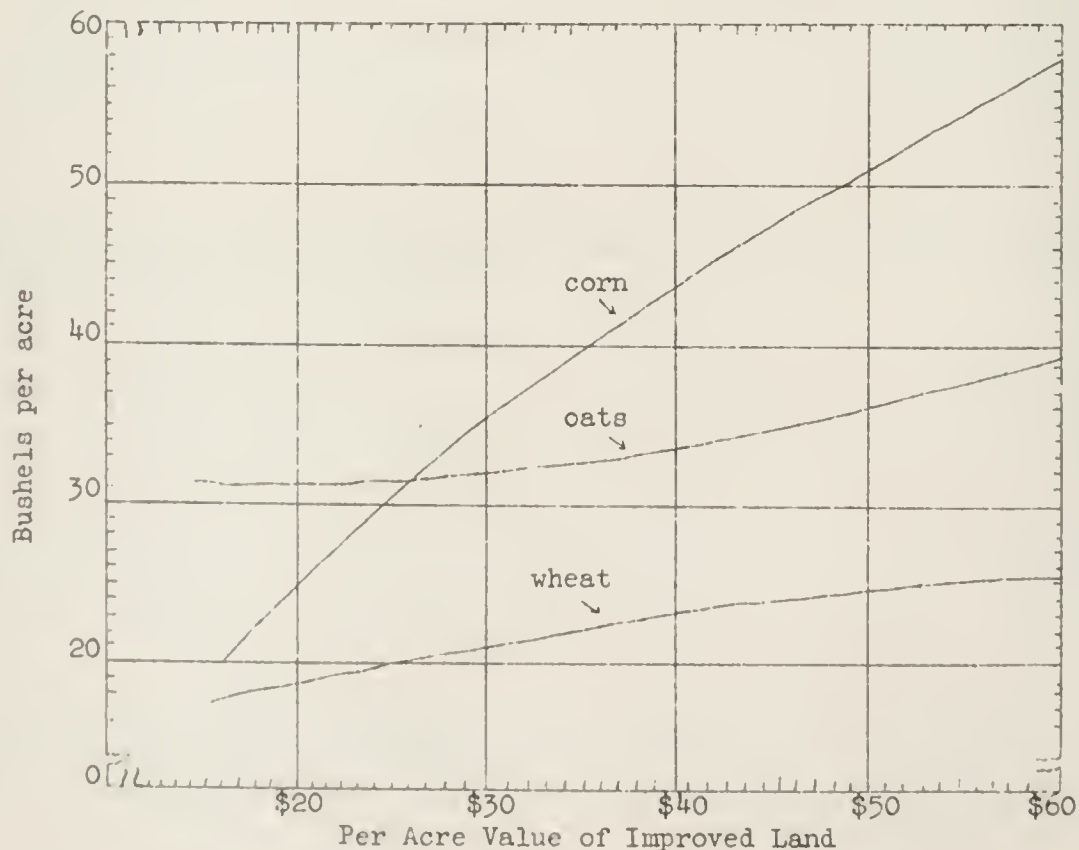


Fig. 1.--Average yields of corn, oats, and wheat with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farm" (Table 2) are taken from Tables 3 to 6 and from Figure 1 as follows:

- Table 3 - Value of improved land.
 - Gross earnings, gross expenses, and net earnings per acre.
 - Value of improved land per acre.
 - All items in the land-use section.
 - Land tax per acre.
- Figure 1 - Value of improved land.
 - Yields for corn, oats, and wheat.
- Table 4 - Source of income.
 - Feed fed per acre to productive livestock.
 - Returns per \$100 worth of feed fed.
 - Dairy returns per cow.
- Table 5 - Size of farm.
 - Value of improvements per acre.
 - Total months of labor.
 - Number of work horses.
 - Improvement cost per acre.
- Table 6 - Size of farm and amount of feed fed per acre.
 - Horse and machinery cost per crop acre.
 - Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops increased as the value per acre for improved land increased from an average of \$20 to \$55 (Table 3). Likewise, the net earnings per acre and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and wheat increased as the land value increased (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1941

Item	Source of income			
	Grain 40%+	Hogs 40%+	General farms	
			L.S. 60%-	L.S. 60%+
Number of farms - - - - -	19	27	25	50
Percent of income from prod. l.s. -	33.9	89.8	54.2	79.1
Percent of income from crops- - - -	51.9	--	28.0	8.0
<u>Investments</u>				
Total per farm- - - - -	\$15 260	\$16 661	\$9 876	\$14 458
Total per acre- - - - -	50	70	43	60
Land per acre - - - - -	30	36	24	30
Improvements per acre - - - - -	6	11	6	11
Machinery per acre- - - - -	5.47	7.32	5.00	5.90
<u>Earnings</u>				
Per farm				
Gross earnings- - - - -	\$ 4 294	\$ 4 730	\$2 958	\$ 3 787
Gross expenses- - - - -	2 051	2 206	1 615	2 086
Net earnings- - - - -	\$ 2 243	\$ 2 524	\$1 343	\$ 1 701
Per acre				
Gross earnings- - - - -	\$ 14.16	\$ 19.91	\$12.92	\$ 15.81
Gross expenses- - - - -	6.76	9.29	7.05	8.71
Net earnings- - - - -	\$ 7.40	\$ 10.62	\$ 5.87	\$ 7.10
Rate earned on investment - - - -	14.7%	15.1%	13.6%	11.8%
Labor and management earnings - -	\$ 1 983	\$ 2 189	\$1 330	\$ 1 407
<u>Size and Intensity</u>				
Acres per farm- - - - -	303	238	229	240
Percent of land area tillable - -	84.0	78.9	83.6	81.8
Percent tillable land in grain- -	49.5	46.5	40.4	37.1
Percent in hay and pasture- - -	42.7	47.6	49.5	54.7
Feed fed per acre to prod. l.s. -	\$ 3.17	\$ 10.32	\$ 3.55	\$ 6.88
Months of labor per 100 crop A. -	10.2	15.6	14.1	17.1
Total months of labor - - - - -	19.6	19.0	17.6	20.8
<u>Crop Yields per Acre</u>				
Corn, bu. - - - - -	38.1	45.9	30.0	39.3
Wheat, bu.- - - - -	19.7	20.8	20.5	21.1
<u>Livestock Returns</u>				
Per \$100 feed fed - - - - -	\$ 176	\$ 183	\$ 223	\$ 194
Hog returns per litter- - - - -	122	151	150	150
Dairy returns per cow - - - - -	71	67	79	98
<u>Expense Factors</u>				
Labor cost per crop acre- - - - -	\$ 4.66	\$ 7.25	\$ 6.19	\$ 7.65
Horse and machinery cost per crop acre - - - - -	3.52	5.64	3.87	5.31
Improvement cost per acre - - - -	.60	.84	.67	.92
Land tax per acre - - - - -	.60	.59	.50	.55

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer, however, should use caution in interpreting the data in Table 4. For example, the fact that hog farms showed the largest rate earned on the investment for 1941 and that general farms with the least livestock showed the smallest does not mean that such a relationship will prevail over a long period of years. The relative profitableness of these enterprises in 1941 was due in part to conditions affecting price and production.

In comparing the returns on the various groups of farms per \$100 worth of feed fed, the farmer should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, in a comparison of crop yields for the various types of farming, the following items should be noted: (1) value of land per acre; (2) percent of land area tillable; (3) percent of land in grain; (4) feed fed per acre to productive livestock; and (5) land tax per acre.

Differences in expenses are significant for the three groups of farms. Labor input per 100 crop acres was highest on the general farms with the most livestock, where 17.1 months of labor were used, and lowest on the grain farms where 10.2 months of labor were used.

The labor cost per crop acre ranged from \$4.66 on the grain farms to \$7.65 on the general farms with the most livestock; the horse and machinery cost per crop acre for these two groups was \$3.52 and \$5.31, respectively. The improvement cost per acre averaged \$.60 on the grain farms and \$.92 on the general farms with the most livestock.

Size of farm. When the farm records in Farming-Type Area 7 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 33 largest farms had labor and management earnings which averaged \$2 314 contrasted with \$884 for the 46 smallest farms. The smaller farms had higher investments per acre for improvements, machinery, and total investment, indicating a higher capital input. The average rate earned on investment was highest for the farms ranging in size from 181 to 300 acres (Table 5).

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1941

Item	Total acres in farm		
	Less than 181	181 to 300	301 or more
Number of farms - - - - -	46	42	33
Acres per farm- - - - -	125	234	434
<u>Investments</u>			
Total per farm- - - - -	\$7 740	\$14 382	\$22 712
Total per acre- - - - -	62	61	52
Land per acre - - - - -	31	33	28
Improvements per acre - - - - -	11	9	8
Machinery per acre- - - - -	6.76	6.40	5.31
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$2 229	\$ 4 217	\$ 5 788
Gross expenses- - - - -	<u>1 381</u>	<u>1 991</u>	<u>2 854</u>
Net earnings- - - - -	\$ 848	\$ 2 226	\$ 2 934
Per acre			
Gross earnings- - - - -	\$17.87	\$ 18.01	\$ 13.35
Gross expenses- - - - -	<u>11.07</u>	<u>8.50</u>	<u>6.58</u>
Net earnings- - - - -	\$ 6.80	\$ 9.51	\$ 6.77
Rate earned on investment - - - -	11.0%	15.5%	12.9%
Labor and management earnings - -	\$ 884	\$ 1 984	\$ 2 314
<u>Size and Intensity</u>			
Percent of land area tillable - -	83.4	84.2	79.8
Percent tillable land in grain- -	44.5	45.8	38.5
Percent in hay and pasture- - -	47.3	47.0	53.0
Feed fed per acre to prod. l.s. -	\$ 7.68	\$ 6.76	\$ 5.36
Percent of income from prod. l.s.	77.5	67.7	69.6
Percent of income from crops- - -	5.6	18.8	19.4
Months of labor per 100 crop A. -	21.2	14.3	11.9
Total months of labor - - - - -	14.6	20.2	25.4
Number of work horses - - - - -	2.3	3.0	3.2
<u>Crop Yields per Acre</u>			
Corn, bu. - - - - -	37.5	40.8	38.0
Wheat, bu.- - - - -	19.9	20.8	20.6
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 199	\$ 195	\$ 184
Hog returns per litter- - - - -	151	139	159
Dairy returns per cow - - - - -	89	81	92
<u>Expense Factors</u>			
Labor cost per crop acre- - - - -	\$ 9.67	\$ 6.38	\$ 5.41
Horse and machinery cost per crop acre - - - - -	6.23	4.53	4.14
Improvement cost per acre - - - -	1.00	.81	.70
Land tax per acre - - - - -	.59	.58	.54

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases but decrease as the size of farm increases. Therefore, the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 7, 1941

Acres per farm	Feed fed per acre			Feed fed per acre		
	Less than \$4.00	\$4.00 to \$6.99	\$7.00 or more	Less than \$4.00	\$4.00 to \$6.99	\$7.00 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 181	\$9.20	\$9.80	\$10.60	\$5.70	\$6.50	\$7.50
181 to 300	5.70	6.90	7.50	3.70	4.70	5.00
301 or more	4.40	5.80	7.20	3.00	4.50	4.90

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grains are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 7, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	121	98	103	96
<u>Capital Investments</u>					
Land- - - - -	\$	\$ 7 433	\$ 7 504	\$ 7 681	\$ 7 582
Farm improvements - - - - -		2 251	2 196	2 118	2 069
Horses- - - - -		280	370	384	393
Productive livestock: Cattle- - -		1 069	978	868	854
Hogs- - -		287	304	319	298
Sheep - - -		93	107	64	71
Poultry - -		117	129	127	136
Total productive livestock- - -	()	(1 571)	(1 518)	(1 378)	(1 339)
Feed and grain- - - - -		1 124	1 127	1 048	1 087
Machinery and equipment - - - -		1 300	1 193	1 081	968
Automobile (farm share) - - - -		170	127	116	120
Total - - - - -	\$	\$14 129	\$14 035	\$13 806	\$13 558
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ --	\$ 20	\$ 10
Productive livestock: Cattle- - -		668	502	491	472
Dairy sales		370	290	316	285
Hogs- - -		1 220	635	623	732
Sheep - - -		111	93	53	36
Poultry - -		115	81	81	93
Egg sales -		262	230	207	244
Total productive livestock- - -	()	(2 746)	(1 836)	(1 771)	(1 862)
Farm products used in household -		292	244	254	268
Feed and grain- - - - -		629	315	298	26
Labor off farm- - - - -		34	45	39	32
Miscellaneous - - - - -		20	14	17	7
AAA payments- - - - -		168	226	179	134
Total - - - - -	\$	\$ 3 889	\$ 2 680	\$ 2 578	\$ 2 339
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 195	\$ 146	\$ 157	\$ 118
Horses- - - - -		13	20	--	--
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - -		415	299	293	260
Automobile (farm share) - - - -		98	69	76	70
Hired labor - - - - -		239	161	160	172
Miscellaneous - - - - -		22	16	18	20
Crop expense- - - - -		143	102	84	93
Livestock expense - - - - -		27	24	28	28
Taxes - - - - -		164	148	132	144
Total - - - - -	\$	\$ 1 316	\$ 985	\$ 948	\$ 905
Receipts less expenses- - - - -	\$	\$ 2 573	\$ 1 695	\$ 1 630	\$ 1 434
Family labor- - - - -		211	216	228	232
Returns for labor, capital, mgt.-	\$	\$ 2 362	\$ 1 479	\$ 1 402	\$ 1 202
Operator's labor- - - - -		467	402	426	400
Net earnings per farm - - - - -	\$	\$ 1 895	\$ 1 077	\$ 976	\$ 802
Rate Earned on Investment - - - -	%	13.4%	7.7%	7.1%	5.9%
Interest on investment- - - - -	\$	\$ 706	\$ 702	\$ 691	\$ 678
Labor and Management Earnings - -		1 656	777	711	524
Nonfarm income- - - - -	\$	\$ 98	\$ 121	\$ 176	\$ 74

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA EIGHT Wabash Valley Grain and Livestock Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON EIGHTY FARMS IN FARMING-TYPE AREA 8, 1941

By P. E. Johnston, J. B. Cunningham, and R. J. Muttl¹/

Farm earnings of accounting farms in Farming-Type Area 8 were much higher in 1941 than in 1940. The average net earnings per acre were \$10.65 in 1941, \$6.15 in 1940, \$6.14 in 1939, and \$4.55 in 1938. The items considered in calculating the net earnings included: inventory changes; cash receipts; cash expenses; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940 (Table 1).



Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all the farms in the area, the crop yields were above average, and the farm operators were more skillful than average in the organization and operation of their farms. Therefore, the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his business operations in order to locate the strong and weak places in the

management of his farm. The data in Tables 1 to 7 and Figure 1 are particularly well adapted for such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.

¹/ W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

W. D. Murphy, Edwards County
R. H. Roll, Gallatin County
H. C. Wheeler, Lawrence County

Thurman Wright, White County
H. H. Lett, Wabash County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 8, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	80	57	63	69
Acres per farm - - - - -		221	227	218	204
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 69	\$ 15	\$ 47	\$ 26
Livestock- - - - -		476	17	136	129
Feed and grain - - - - -		496	360	-43	-97
Machinery and equipment- - - - -		140	64	42	84
Automobile (farm share)- - - - -		60	21	3	-2
Total- - - - -	\$	\$1 241	\$ 477	\$ 185	\$ 140
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 8	\$ 8	\$ 4	\$ 14
Horses - - - - -		33	39	50	39
Productive livestock: Cattle - - - - -		776	646	553	572
Dairy sales- - - - -		245	161	149	199
Hogs - - - - -		1 164	686	681	778
Sheep- - - - -		87	67	65	54
Poultry- - - - -		92	74	83	82
Egg sales- - - - -		232	206	195	186
Total productive livestock - - - - -	()	(2 646)	(1 840)	(1 731)	(1 871)
Feed and grain - - - - -		1 195	1 062	1 111	826
Machinery and equipment- - - - -		158	166	132	113
Automobile (farm share)- - - - -		76	21	34	21
Labor off farm - - - - -		29	31	31	32
Miscellaneous- - - - -		7	14	13	2
AAA payments - - - - -		134	339	338	85
Total- - - - -	\$	\$4 336	\$3 520	\$3 444	\$3 008
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 272	\$ 203	\$ 164	\$ 177
Horses - - - - -		18	17	27	23
Productive livestock: Cattle - - - - -		388	273	330	283
Hogs - - - - -		77	47	63	61
Sheep- - - - -		9	10	19	3
Poultry- - - - -		29	23	26	24
Total productive livestock - - - - -	()	(503)	(353)	(443)	(376)
Feed and grain - - - - -		439	371	264	252
Machinery and equipment- - - - -		702	625	466	496
Automobile (farm share)- - - - -		239	124	119	100
Hired labor- - - - -		237	187	172	210
Miscellaneous- - - - -		17	22	20	20
Crop expense - - - - -		139	116	96	107
Livestock expense- - - - -		23	18	22	23
Taxes- - - - -		205	204	181	171
Total- - - - -	\$	\$2 344	\$2 240	\$1 974	\$1 960
<u>Summary</u>					
Cash balance - - - - -	\$	\$1 492	\$1 280	\$1 470	\$1 048
Farm products used in household- - - - -		267	211	230	252
Total inventory change - - - - -		1 241	477	185	140
Receipts less expenses - - - - -	\$	\$3 000	\$1 968	\$1 894	\$1 440
Total unpaid labor - - - - -		646	574	558	512
Net earnings per farm- - - - -	\$	\$2 354	\$1 394	\$1 336	\$ 928
Net earnings per acre- - - - -	\$	\$10.65	\$ 6.15	\$ 6.14	\$ 4.55

Inventory changes. The year 1941 was the sixth consecutive year of increasing inventories. The increases for the past four years ranged from \$1 241 in 1941 to \$140 in 1938 (Table 1). The largest increases in 1941 were for live-stock and feed and grain. The average amounts of grain on hand in Area 8 at the two inventory periods were:

<u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	1 067	1 454
Oats	209	317
Wheat	154	171
Soybeans	46	81

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$1 492, a larger margin than for any other year during the past four years. The cash balance, the difference between cash receipts and expenses, is the amount of money which is available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$45 per month in 1941 and at \$40 per month in each of the three previous years.

The net earnings per farm averaged \$2 354 in 1941 compared with \$1 394 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 8. For example, 25 farms earned less than twelve percent on their investment, with an average rate earned of 7.5 percent; but 18 farms earned 20 percent or more, with an average rate earned of 23.3 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$758 for labor and management earnings contrasted with \$3 551 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 12.00	25	7.5	226	\$13 769	\$3 174	\$1 036	\$ 758
12.00 to 19.99	37	15.9	210	15 704	4 568	2 493	2 206
20.00 or more	18	23.3	238	16 709	5 955	3 898	3 551

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 8, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	15.4%	15.4%
Number of farms- - - - -	--	--	80
Acres in farm- - - - -	_____	221	221
Acres tillable - - - - -	_____	185	185
Acres in crops - - - - -	_____	127	127
Gross earnings per acre- - - - -	\$ _____	\$ _____ ^{a/}	\$19.65
Gross expenses per acre- - - - -	_____	_____	9.00
Net earnings per acre- - - - -			10.65
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 40	\$ 40
Value of improved land per acre- - - - -	_____	_____ ^{a/}	44
Value of improvements per acre - - - - -	_____	_____ ^{e/}	9
Total investment per acre- - - - -		69	69
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ ^{a/}	83.5
Percent of tillable land in:			
Corn - - - - -	_____	_____	22.9
Oats - - - - -	_____	_____	7.1
Wheat- - - - -	_____	_____	15.8
Soybeans - - - - -	_____	_____	4.9
Other crops- - - - -	_____	_____	13.1
Legume hay and pasture - - - - -	_____	_____	22.0
Nonlegume hay and pasture- - - - -	_____	_____	14.2
<u>Crop Yields</u>			
Corn, bu.- - - - -	_____	_____ ^{b/}	48.0
Oats, bu.- - - - -	_____	_____	41.3
Wheat, bu.- - - - -	_____	_____	24.4
Soybeans, bu.- - - - -	_____	16.6	16.6
<u>Livestock Factors</u>			
Value of feed fed to productive livestock- - -	\$ _____	\$1 486	\$1 486
Feed fed per acre to productive livestock- - -	_____	_____ ^{c/}	6.72
Returns per \$100 worth of feed fed - - - - -	_____	_____	192
Poultry returns per hen- - - - -	_____	3.01	3.01
Number of litters farrowed - - - - -	_____	9.6	9.6
Number of pigs weaned per litter - - - - -	_____	7.1	7.1
Returns per litter farrowed- - - - -	\$ _____	\$ 156	\$ 156
Average number of cows milked- - - - -	_____	3.7	3.7
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ ^{c/}	\$ 89
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - - -	\$ _____	\$ _____ ^{d/}	\$ 5.02
Labor cost per crop acre - - - - -	_____	_____	6.72
Total months of labor- - - - -	_____	_____ ^{e/}	18.8
Number of work horses- - - - -	_____	_____	3.0
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$.88
Land tax per acre- - - - -	_____	_____ ^{a/}	.81

Source of Standards:

^{a/} Table 3, value of improved land.

^{b/} Fig. 1, value of improved land.

^{c/} Table 4, source of income.

^{d/} Table 6, size of farm and value of feed fed.

^{e/} Table 5, size of farm.

-5-

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 8, 1941

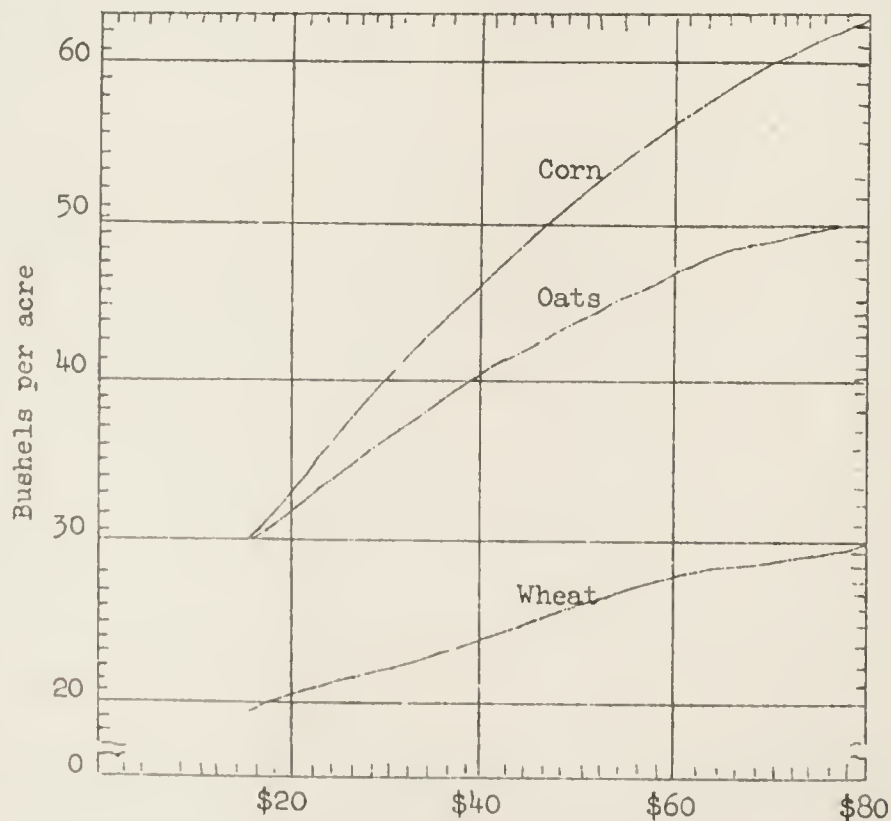
The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Gross expense per acre	Factors that affect expenses		
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked		Horse and machinery cost per crop acre	Labor cost per crop acre	Improvement cost per acre
				Corn, bu.	Oats, bu.	Wheat, bu.									
25.4	421								4.51	206					
23.4	381								4.21	196					
21.4	341								3.91	186					
19.4	301								3.61	176					
17.4	261								3.31	166					
15.4	221								3.01	156					
13.4	181								2.71	146					
11.4	141								2.41	136					
9.4	101								2.11	126					
7.4	61								1.81	116					
5.4	--								1.51	106					
2%	40	\$3	3%	4	4	2	\$2	\$15	\$.30	\$10	\$10	\$2	\$1	\$2	\$.30

* Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 8, 1941

Item	Value of improved land			
	\$18 to \$32	\$33 to \$47	\$48 to \$62	\$63 or more
Average value of improved land- - -	\$ 29	\$ 40	\$ 56	\$ 70
Number of farms - - - - -	25	33	9	13
Acres per farm- - - - -	215	230	221	212
Percent of land area tillable - - -	76.6	83.7	94.5	88.5
Percent of tillable land in:				
Corn- - - - -	19.7	24.0	23.0	25.7
Oats- - - - -	7.6	7.4	7.7	6.0
Wheat - - - - -	12.8	16.2	19.3	16.6
Soybeans- - - - -	4.3	4.9	6.7	5.0
Other crops - - - - -	19.8	9.9	14.0	8.6
Legume hay and pasture- - - - -	18.8	24.7	19.9	22.1
Nonlegume hay and pasture - - - -	17.0	12.9	9.4	16.0
Gross earnings per acre - - - - -	\$14.14	\$19.28	\$26.32	\$26.56
Gross expenses per acre - - - - -	<u>8.08</u>	<u>8.63</u>	<u>10.05</u>	<u>11.05</u>
Net earnings per acre - - - - -	\$ 6.06	\$10.65	\$16.27	\$15.51
Land tax per acre - - - - -	\$.63	\$.76	\$.92	\$ 1.17



Per Acre Value of Improved Land
Fig. 1.--Average yields of corn, oats, and wheat
with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farm" (Table 2) are taken from Tables 3 to 6 and from Figure 1 as follows:

- Table 3 - Value of improved land.
 - Gross earnings, gross expenses, and net earnings per acre.
 - Value of improved land per acre.
 - All items in the land-use section.
 - Land tax per acre.
- Figure 1 - Value of improved land.
 - Yields for corn, oats, and wheat.
- Table 4 - Source of income.
 - Feed fed per acre to productive livestock.
 - Returns per \$100 worth of feed fed.
 - Dairy returns per cow.
- Table 5 - Size of farm.
 - Value of improvements per acre.
 - Total months of labor.
 - Number of work horses.
 - Improvements cost per acre.
- Table 6 - Size of farm and value of feed fed per acre.
 - Horse and machinery cost per crop acre.
 - Labor cost per crop acre.

The terms used in the tables are the same as those in the Illinois farm account book. For example, "improved land" is classified on page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on page 18, line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. The percent of tillable land in grain crops increased as the value per acre of improved land increased (Table 3). Likewise, the percent of land area tillable, the net earnings per acre, and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and wheat increased rapidly as the land value increased from \$20 per acre to approximately \$80 per acre (Fig. 1). By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area C, 1941

Item	Source of income			
	Grain 40%+	Hogs 40%+	General farms	
			L.S. 60%+	L.S. 60%+
Number of farms - - - - -	17	22	16	25
Percent of income from prod. l.s.	31.7	82.2	53.4	74.1
Percent of income from crops - -	58.3	6.9	34.5	13.9
<u>Investments</u>				
Total per farm- - - - -	\$17 074	\$14 228	\$16 832	\$14 137
Total per acre- - - - -	67	71	74	67
Land per acre - - - - -	44	41	42	36
Improvements per acre - - - -	8	9	10	10
Machinery per acre- - - - -	6.35	6.33	7.15	5.33
<u>Earnings</u>				
Per farm				
Gross earnings- - - - -	\$ 5 195	\$ 4 071	\$ 4 514	\$ 3 899
Gross expenses- - - - -	2 126	1 938	2 082	1 887
Net earnings- - - - -	\$ 3 069	\$ 2 133	\$ 2 432	\$ 2 012
Per acre				
Gross earnings- - - - -	\$ 20.40	\$ 20.42	\$ 19.73	\$ 18.34
Gross expenses- - - - -	8.35	9.72	9.10	8.88
Net earnings- - - - -	\$ 12.05	\$ 10.70	\$ 10.63	\$ 9.46
Rate earned on investment - - -	18.0%	15.0%	14.4%	14.2%
Labor and management earnings -	\$ 2 687	\$ 1 874	\$ 2 037	\$ 1 798
<u>Size and Intensity</u>				
Acres per farm- - - - -	255	199	229	213
Percent of land area tillable -	85.5	83.9	81.6	82.8
Percent tillable land in grain-	63.4	48.6	56.5	45.0
Percent in hay and pasture- - -	21.7	41.4	34.3	45.3
Feed fed per acre to prod. l.s.	\$ 3.78	\$ 9.80	\$ 5.57	\$ 7.37
Months of labor per 100 crop A.	10.8	17.6	14.2	17.4
Total months of labor - - - - -	19.1	18.5	19.0	18.9
<u>Crop Yields per Acre</u>				
Corn, bu. - - - - -	46.7	51.5	46.4	46.9
Wheat, bu.- - - - -	23.5	26.0	24.4	24.3
<u>Livestock Returns</u>				
Per \$100 feed fed - - - - -	\$ 189	\$ 181	\$ 206	\$ 199
Hog returns per litter- - - - -	155	153	159	159
Dairy returns per cow - - - - -	100	77	81	95
<u>Expense Factors</u>				
Labor cost per crop acre- - -	\$ 4.71	\$ 8.32	\$ 6.39	\$ 7.85
Horse and machinery cost per crop acre - - - - -	4.32	5.79	4.97	5.20
Improvement cost per acre - - -	.55	1.12	1.04	.84
Land tax per acre - - - - -	.91	.82	.78	.72

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer, however, should use caution in interpreting the data in Table 4. For example, the fact that grain farms showed the largest rate earned on the investment for 1941 and that general farms with the largest amount of live-stock showed the smallest does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises in 1941 was due largely to conditions affecting price and production.

When comparing the returns on the various groups of farms per \$100 worth of feed fed, one should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, when comparing crop yields for the various types of farming, one should note the following items which indicate that the grain farms were located on the better land: (1) high value of land per acre; (2) large percent of land area tillable; (3) large percent of land in grain; and (4) high land tax per acre.

Differences in expenses, are highly significant for the four groups of farms. Labor input per 100 crop acres was highest on the hog farms, where 17.6 months of labor were used, and lowest on the grain farms, where 10.8 months of labor were used.

The labor cost per crop acre ranged from \$8.32 on the hog farms to \$4.71 on the grain farms. Likewise, the horse and machinery cost per crop acre was highest on the hog farms, where it averaged \$5.79 and lowest on the grain farms, where it averaged \$4.32; and the improvement cost per acre averaged \$1.12 on the hog farms and \$.55 on the grain farms.

Size of farm. When the farm records in Farming-Type Area 8 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 16 farms that were 301 acres or larger in size had labor and management earnings which averaged \$3 128 contrasted with \$1 570 for the 31 farms that averaged 131 acres in size. The rate earned on investment was approximately the same for the three groups of farms.

The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the larger amount of feed fed per acre to productive livestock, by the larger percent of income from livestock, and by the smaller percent of income from crops.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1941

Item	Total acres in farm		
	Less than 181	181 to 300	301 or more
Number of farms - - - - -	31	33	16
Acres per farm- - - - -	131	235	367
<u>Investments</u>			
Total per farm- - - - -	\$10 596	\$14 952	\$25 257
Total per acre- - - - -	81	64	69
Land per acre - - - - -	45	37	41
Improvements per acre - - - - -	11	8	9
Machinery per acre- - - - -	7.39	6.09	5.53
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$ 3 163	\$ 4 210	\$ 6 911
Gross expenses- - - - -	<u>1 520</u>	<u>1 947</u>	<u>2 993</u>
Net earnings- - - - -	\$ 1 643	\$ 2 263	\$ 3 918
Per acre			
Gross earnings- - - - -	\$ 24.09	\$ 17.93	\$ 18.84
Gross expenses- - - - -	<u>11.58</u>	<u>8.29</u>	<u>8.16</u>
Net earnings- - - - -	\$ 12.51	\$ 9.64	\$ 10.68
Rate earned on investment - - - - -	15.5%	15.1%	15.5%
Labor and management earnings - - - - -	\$ 1 570	\$ 1 992	\$ 3 128
<u>Size and Intensity</u>			
Percent of land area tillable - - - - -	85.6	81.6	84.6
Percent of tillable land in grain - - - - -	48.9	52.4	56.2
Percent in hay and pasture- - - - -	41.0	37.4	31.2
Feed fed per acre to productive livestock - - - - -	\$ 9.27	\$ 5.70	\$ 6.30
Percent of income from productive livestock - - - - -	71.3	58.0	56.0
Percent of income from crops- - - - -	16.6	29.9	34.7
Months of labor per 100 crop acres- - - - -	20.9	13.8	12.0
Total months of labor - - - - -	15.8	18.1	26.2
Number of work horses - - - - -	2.7	2.9	3.7
<u>Crop Yields per Acre</u>			
Corn, bu. - - - - -	57.0	46.0	43.7
Wheat, bu.- - - - -	26.2	24.4	23.4
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 200	\$ 198	\$ 178
Hog returns per litter- - - - -	157	154	159
Dairy returns per cow - - - - -	96	79	93
<u>Expense Factors</u>			
Labor cost per crop acre- - - - -	\$ 9.51	\$ 6.27	\$ 5.40
Horse and machinery cost per crop acre- - - - -	6.09	4.77	4.62
Improvement cost per acre - - - - -	1.20	.76	.82
Land tax per acre - - - - -	.91	.75	.80

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases but decrease as the size of farm increases. Therefore, the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 8, 1941

Acres per farm	Feed fed per acre			Feed fed per acre		
	Less than \$5.00	\$5.00 to \$8.99	\$9.00 or more	Less than \$5.00	\$5.00 to \$8.99	\$9.00 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 181	7.80	9.70	9.90	6.00	6.50	7.20
181 to 300	5.70	6.40	8.10	4.90	5.10	5.60
300 or more	4.20	5.20	6.50	4.20	4.80	5.00

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grain are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 8, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	80	57	63	69
<u>Capital Investments</u>					
Land- - - - -	\$	\$ 8 951	\$10 378	\$ 9 979	\$ 9 605
Farm improvements - - - - -		2 039	2 087	1 896	2 083
Horses- - - - -		286	349	401	432
Productive livestock: Cattle - - -		869	772	639	642
Hogs - - - - -		279	276	296	296
Sheep- - - - -		73	80	72	66
Poultry- - - - -		123	130	127	118
Total productive livestock- - - -	()	(1 344)	(1 258)	(1 134)	(1 122)
Feed and grain- - - - -		1 333	1 217	1 228	1 347
Machinery and equipment - - - - -		1 205	1 283	1 197	1 050
Automobile (farm share) - - - - -		167	144	126	121
Total - - - - -	\$	\$15 325	\$16 716	\$15 961	\$15 760
<u>Receipts and Net Increases</u>					
Horses- - - - -		\$ --	\$ --	\$ --	\$ 12
Productive livestock: Cattle - - -		615	444	420	392
Dairy sales- - - - -		245	161	149	199
Hogs - - - - -		1 336	624	582	736
Sheep- - - - -		87	66	49	50
Poultry- - - - -		90	45	58	59
Egg sales- - - - -		282	206	195	186
Total productive livestock- - - -	()	(2 655)	(1 546)	(1 453)	(1 622)
Farm products used in household - -		267	211	239	252
Feed and grain- - - - -		1 202	1 051	804	477
Labor off farm- - - - -		29	31	31	32
Miscellaneous - - - - -		7	14	13	2
AAA payments- - - - -		184	339	338	85
Total - - - - -	\$	\$ 4 344	\$ 3 192	\$ 2 878	\$ 2 482
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 195	\$ 180	\$ 113	\$ 136
Horses- - - - -		21	20	6	--
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - - -		404	395	292	294
Automobile (farm share) - - - - -		103	82	82	81
Hired labor - - - - -		237	187	172	210
Miscellaneous - - - - -		17	22	20	20
Crop expense- - - - -		139	116	96	107
Livestock expense - - - - -		23	13	22	23
Taxes - - - - -		205	204	181	171
Total - - - - -	\$	\$ 1 344	\$ 1 224	\$ 984	\$ 1 042
Receipts less expenses- - - - -	\$	\$ 3 000	\$ 1 968	\$ 1 894	\$ 1 440
Family labor- - - - -		178	155	137	117
Returns for labor, capital, mgt.- -	\$	\$ 2 822	\$ 1 813	\$ 1 757	\$ 1 323
Operator's labor- - - - -		463	419	421	395
Net earnings per farm - - - - -	\$	\$ 2 354	\$ 1 394	\$ 1 336	\$ 928
Rate Earned on Investment - - - - -	%	15.4%	8.3%	8.4%	5.9%
Interest on investment- - - - -	\$	\$ 766	\$ 836	\$ 798	\$ 788
Labor and Management Earnings - - -		2 056	977	959	535
Nonfarm income- - - - -	\$	\$ 135	\$ 79	\$ 63	\$ 102

FARM BUSINESS REPORT . . . 1941



The farmer contributes most to the war effort by efficiently using his land,
labor, machinery, and other available resources

FARMING-TYPE AREA NINE Southern Fruit and Vegetable Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON THIRTY-FOUR FARMS IN FARMING-TYPE AREA 9, 1941

By P. E. Johnston, J. B. Cunningham, and R. J. Mutt^{1/}

Farm earnings of accounting farms in Farming-Type Area 9 were much higher in 1941 than in 1940. The average net earnings per acre were \$5.13 in 1941, \$3.49 in 1940, \$3.31 in 1939, and \$2.73 in 1938. The items considered in calculating the net earnings included: inventory changes; cash receipts; cash expenses; the value of farm products used in the household; and unpaid family labor. Each of these five items was larger in 1941 than in 1940 (Table 1).



▨ Farming-Type Area 9
Fruit and Vegetable

Larger incomes from livestock and livestock products were, to a considerable extent, responsible for larger cash receipts in 1941 than in 1940. Although cash expenditures were higher, especially for feed and machinery, the total increase in income was greater than the total increase in expenditures; therefore the cash balance showed an increase for 1941.

The accounting farms in this report were larger than the average of all the farms in the area, the crop yields were above average, and the farm operators were more skillful than average in the organization and operation of their farms. Therefore, the figures contained in this report represent conditions which are better than average for the area.

The averages presented in this report provide a good local yardstick of efficiency. Any farmer keeping farm records can apply this yardstick to his

business operations in order to locate the strong and weak places in the management of his farm. The data in Tables 1 to 7 and Figure 1 are particularly well adapted for such a comparison because they contain both measures of earnings and measures of those management factors which are responsible for major variations in farm earnings.

^{1/} W. N. Thompson supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm account project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the indicated farm advisers:

J. G. McCall, Jackson-Perry Counties
J. R. Strubinger, Massac County
G. C. Smith, Pope-Hardin Counties

W. C. Anderson, Johnson County
T. L. Davis, Pulaski-Alexander Counties
E. A. Bierbaum, Union County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 9, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms- - - - -	--	34	55	56	37
Acres per farm - - - - -		232	234	186	224
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 11	\$ 132	\$ -79	\$ -18
Livestock- - - - -		294	125	16	44
Feed and grain - - - - -		274	181	61	-122
Machinery and equipment- - - - -		36	35	9	134
Automobile (farm share)- - - - -		-32	41	5	13
Total- - - - -	\$	\$ 583	\$ 514	\$ 12	\$ 51
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 8	\$ 31	\$ 20	\$ --
Horses - - - - -		75	45	58	99
Productive livestock: Cattle - - - - -		623	396	294	290
Dairy sales- - - - -		559	364	298	312
Hogs - - - - -		747	331	360	667
Sheep- - - - -		44	38	40	12
Poultry- - - - -		76	60	60	65
Egg sales- - - - -		186	119	124	176
Total productive livestock - - - - -	()	(2 235)	(1 308)	(1 176)	(1 522)
Feed and grain - - - - -		734	587	1 169	504
Machinery and equipment- - - - -		206	94	100	93
Automobile (farm share)- - - - -		9	40	13	24
Labor off farm - - - - -		29	14	21	24
Miscellaneous- - - - -		20	2	15	3
AAA payments - - - - -		137	243	259	145
Total- - - - -	\$	\$3 453	\$2 364	\$2 831	\$2 414
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 258	\$ 213	\$ 168	\$ 127
Horses - - - - -		21	28	46	56
Productive livestock: Cattle - - - - -		246	135	94	149
Hogs - - - - -		60	34	25	48
Sheep- - - - -		1	9	3	4
Poultry- - - - -		24	15	13	14
Total productive livestock - - - - -	()	(351)	(193)	(135)	(215)
Feed and grain - - - - -		417	184	451	219
Machinery and equipment- - - - -		678	448	373	444
Automobile (farm share)- - - - -		76	157	92	117
Hired labor- - - - -		313	249	411	195
Miscellaneous- - - - -		18	18	25	16
Crop expense - - - - -		156	96	75	72
Livestock expense- - - - -		36	19	24	13
Taxes- - - - -		159	147	135	141
Total- - - - -	\$	\$2 463	\$1 752	\$1 935	\$1 615
<u>Summary</u>					
Cash balance - - - - -	\$	\$ 990	\$ 612	\$ 896	\$ 799
Farm products used in household- - - - -		278	220	229	284
Total inventory change - - - - -		583	514	12	51
Receipts less expenses - - - - -	\$	\$1 851	\$1 346	\$1 137	\$1 134
Total unpaid labor - - - - -		663	530	522	521
Net earnings per farm- - - - -	\$	\$1 188	\$ 816	\$ 615	\$ 613
Net earnings per acre- - - - -	\$	\$ 5.13	\$ 3.49	\$ 3.31	\$ 2.73

-3-

Inventory changes. The year 1941 was the fifth consecutive year of increasing inventories. The increases during the past four years ranged from \$583 in 1941 to \$12 in 1939 (Table 1). The largest increases in 1941 were for livestock and feed and grain. The average amounts of grain on hand in Area 9 at the two inventory periods were:

* <u>Crop</u>	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	807	746
Oats	126	153
Wheat	90	157
Soybeans	26	47

Summary of cash receipts and cash expenses. Cash receipts exceeded cash expenses in 1941 by \$990, a larger margin than for any other year during the past four years. The cash balance, the difference between cash receipts and expenses, is the amount of money which was available for family living expenses, interest, debt payments, and savings.

Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1941 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at \$45 per month in 1941 and at \$40 per month in each of the three previous years.

The net earnings per farm averaged \$1,188 in 1941 compared with \$816 in 1940. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 9. For example, 10 farms earned less than six percent on their investment, with an average rate earned of 2.2 percent; but 10 farms earned 14 percent or more, with an average rate earned of 18.3 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$115 for labor and management earnings contrasted with \$1,872 for the latter group. The variation in earnings and in size of farm for all the records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 6.0	10	2.2	248	\$12 828	\$2 895	\$ 288	\$ 115
6.0 to 13.99	14	9.8	236	13 459	3 518	1 318	1 053
14.0 or more	10	18.3	209	10 435	3 808	1 908	1 872

TABLE 2.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 9, 1941

Item	Your farm	Standards for your farm	Average of all farms
Rate earned on investment- - - - -	_____ %	9.6%	9.6%
Number of farms- - - - -	--	--	34
Acres in farm- - - - -	_____	232	232
Acres tillable - - - - -	_____	175	175
Acres in crops - - - - -	_____	105	105
Gross earnings per acre- - - - -	\$ _____	\$ _____ a/	\$14.31
Gross expenses per acre- - - - -	_____	_____	9.18
Net earnings per acre- - - - -	\$ _____	\$ _____	\$ 5.13
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 26	\$ 26
Value of improved land per acre- - - - -	_____	_____ a/	30
Value of improvements per acre - - - - -	_____	_____ e/	10
Total investment per acre- - - - -	_____	53	53
<u>Land Use</u>			
Percent of land area tillable- - - - -	_____	_____ a/	75.6
Percent of tillable land in:			
Corn - - - - -	_____	_____	15.5
Oats - - - - -	_____	_____	4.7
Wheat- - - - -	_____	_____	11.8
Soybeans - - - - -	_____	_____	2.8
Others crops - - - - -	_____	_____	15.5
Legume hay and pasture - - - - -	_____	_____	30.6
Nonlegume hay and pasture- - - - -	_____	_____	19.1
<u>Crop yields</u>			
Corn - - - - -	_____	_____ b/	34.0
Oats - - - - -	_____	_____	29.8
Wheat- - - - -	_____	_____	21.5
<u>Livestock Factors</u>			
Value of feed fed to productive livestock- -	\$ _____	\$ 1 209	\$ 1 209
Feed fed per acre to productive livestock- -	_____	_____ c/	5.22
Returns per \$100 worth of feed fed - - -	_____	_____	204
Poultry returns per hen- - - - -	_____	3.05	3.05
Number of litters farrowed - - - - -	_____	7.6	7.6
Number of pigs weaned per litter - - - - -	_____	6.8	6.8
Returns per litter farrowed- - - - -	\$ _____	\$ 135	\$ 135
Average number of cows milked- - - - -	_____	6.4	6.4
Dairy returns per cow milked - - - - -	\$ _____	\$ _____ c/	\$ 98
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - -	\$ _____	\$ _____ d/	\$ 6.47
Labor cost per crop acre - - - - -	_____	_____	9.03
Total months of labor- - - - -	_____	_____ e/	23.0
Number of work horses- - - - -	_____	_____	3.6
Improvement cost per acre- - - - -	\$ _____	\$ _____	\$ 1.03
Land tax per acre - - - - -	_____	_____ a/	.58

Source of Standards:

a/ Table 3, value of improved land.

b/ Fig. 1, value of improved land.

c/ Table 4, source of income.

d/ Table 6, size of farm and value of feed fed.

e/ Table 5, size of farm.

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CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 9, 1941

The numbers above the lines across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings										Factors that affect expenses		
			Percent of tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. l.s.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Gross expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Improvement cost per acre
				Corn, bu.	Oats, bu.	Wheat, bu.									
19.6	382								4.55	185					
17.6	352								4.25	175					
15.6	322								3.95	165					
13.6	292								3.65	155					
11.6	262								3.35	145					
9.6	232								3.05	135					
7.6	202								2.75	125					
5.6	172								2.45	115					
3.6	142								2.15	105					
1.6	112								1.85	95					
--	82								1.55	85					
* 2%	30	\$2	2%	3	3	2	\$2	\$15	\$.30	\$10	\$10	\$1	\$1	\$2	\$.20

*Each space between lines represents the values indicated at bottom of each column.

TABLE 3.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 9, 1941

Item	Value of improved land			
	\$10 to \$22	\$25 to \$30	\$31 to \$40	\$43 to \$50
Average value of improved land-	\$ 18	\$ 28	\$ 36	\$ 46
Number of farms - - - - -	10	11	7	6
Acres per farm- - - - -	250	208	186	298
Percent of land area tillable -	68.0	87.1	83.3	65.9
Percent of tillable land in:				
Corn- - - - -	11.5	16.4	17.7	17.5
Oats- - - - -	3.9	5.3	4.4	5.1
Wheat - - - - -	5.7	15.3	15.5	11.6
Soybeans- - - - -	.6	3.5	3.1	4.4
Other crops - - - - -	13.5	11.7	20.1	20.4
Legume hay and pasture- - - -	36.8	34.0	29.7	29.8
Nonlegume hay and pasture - -	28.0	13.8	9.5	11.2
Gross earnings per acre - - - -	\$11.46	\$15.75	\$18.68	\$13.30
Gross expenses per acre - - - -	8.40	8.60	11.88	9.09
Net earnings per acre - - - - -	\$ 3.06	\$ 7.15	\$ 6.80	\$ 4.21
Land tax per acre - - - - -	\$.44	\$.56	\$.79	\$.66

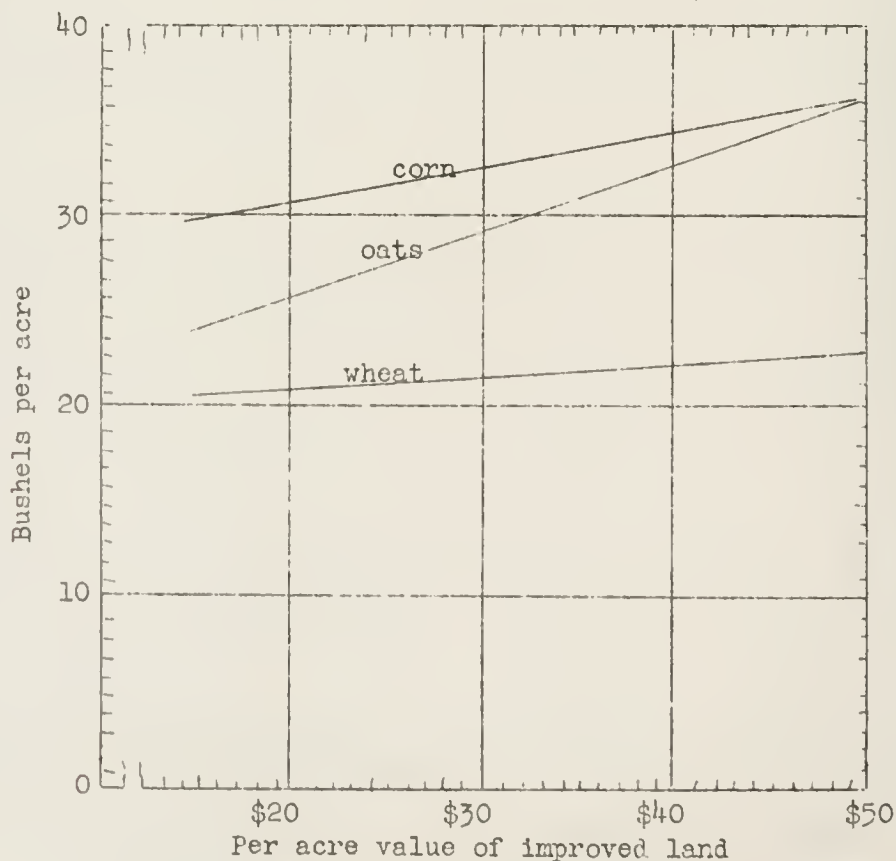


Fig. 1.--Average yields of corn, oats, and wheat
with varying values of improved land.

Explanation of Tables

Variable standards are used in the analysis of the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per \$100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The "standards for your farm" (Table 2) are taken from Tables 3 to 6 and from Figure 1 as follows:

- Table 3 - Value of improved land.
 - Gross earnings, gross expenses, and net earnings per acre.
 - Value of improved land per acre.
 - All items in the land-use section.
 - Land tax per acre.
- Figure 1 - Value of improved land.
 - Yields for corn, oats, and wheat.
- Table 4 - Source of income.
 - Feed fed per acre to productive livestock.
 - Returns per \$100 worth of feed fed.
 - Dairy returns per cow.
- Table 5 - Size of farm.
 - Value of improvements per acre.
 - Total months of labor
 - Number of work horses.
 - Improvement cost per acre.
- Table 6 - Size of farm and amount of feed fed per acre.
 - Horse and machinery cost per crop acre.
 - Labor cost per crop acre.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means tillable land and land occupied by farmstead, roads, and orchards. Likewise, "crop acres" are listed on Page 18, Line 36, of the farm account book. They include all the tillable land on which work has been done in preparing a seedbed or in cultivating or harvesting a crop.

Land use and crop yields. Ordinarily, the percent of tillable land in grain crops, net earnings per acre, and land tax per acre increase as the value per acre for improved land increases. The farms in Area 9 showed these tendencies; however, the relationships are not true in all cases because of the small number of records in each land value group (Table 3).

Yields per acre for corn, oats, and wheat increased as the land value increased from \$15 per acre to \$50 per acre (Fig. 1).

By using Table 3 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and net earnings per acre were high or low for 1941 in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1941

Item	Source of income		
	Hogs 40%+	General farms	
		L.S. 60%-	L.S. 60%+
Number of farms ^a / - - - - -	6	10	15
Percent of income from productive livestock	86.5	49.4	79.6
Percent of income from crops- - - - -	--	31.5	8.6
<u>Investments</u>			
Total per farm- - - - -	\$12 859	\$10 054	\$13 354
Total per acre- - - - -	56	48	53
Land per acre - - - - -	30	24	26
Improvements per acre - - - - -	8	8	9
Machinery per acre- - - - -	5.55	6.63	5.67
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$ 3 216	\$ 2 787	\$ 3 593
Gross expenses- - - - -	1 927	1 647	2 208
Net earnings- - - - -	\$ 1 289	\$ 1 140	\$ 1 385
Per acre			
Gross earnings- - - - -	\$ 14.12	\$ 13.23	\$ 14.25
Gross expenses- - - - -	8.46	7.82	8.76
Net earnings- - - - -	\$ 5.66	\$ 5.41	\$ 5.49
Rate earned on investment - - - - -	10.0%	11.3%	10.4%
Labor and management earnings - - - - -	\$ 1 047	\$ 1 110	\$ 1 160
<u>Size and Intensity</u>			
Acres per farm- - - - -	228	211	252
Percent of land area tillable - - - - -	83.4	81.4	69.2
Percent of tillable land in grain - - - - -	42.4	41.5	38.4
Percent in hay and pasture- - - - -	49.7	45.1	53.7
Feed fed per acre to productive livestock	\$ 7.63	\$ 3.25	\$ 5.58
Months of labor per 100 crop acres- - - - -	17.4	19.5	22.5
Total months of labor - - - - -	20.0	21.4	21.9
<u>Crop yields per Acre</u>			
Corn, bu. - - - - -	34.4	30.7	36.7
Wheat, bu.- - - - -	17.9	21.6	23.1
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 172	\$ 231	\$ 218
Hog returns per litter- - - - -	135	128	142
Dairy returns per cow - - - - -	100	94	99
<u>Expense Factors</u>			
Labor cost per crop acre- - - - -	\$ 7.64	\$ 7.87	\$ 9.55
Horse and machinery cost per crop acre- - - - -	5.41	4.49	7.62
Improvement cost per acre - - - - -	.76	.55	.95
Land tax per acre - - - - -	.59	.57	.58

^a/ Three fruit and truck farms not included.

Source of income. The grouping of accounting farms according to source of income for 1941 gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Each farmer, however, should use caution in interpreting the data in Table 4. For example, the fact that the general farms with the least livestock showed a larger rate earned on the investment for 1941 than the general farms with the most livestock does not mean that such a relationship will prevail over a long period of years. The relative profitableness of various enterprises in 1940 was due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per \$100 worth of feed fed, the farmer should consider the fact that there is a wide variation in the necessary returns per \$100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117.

Furthermore, in any comparison of factors for the various groups of farms, one should consider the facts that the number of farms for which the averages are given is small and that the individual farms in each group are variable as to organization and management.

Differences in expenses are significant for the three groups of farms. Labor input per 100 crop acres was highest on the general farms with the most livestock, where 22.5 months of labor were used, and lowest on the hog farms where 17.4 months of labor were used.

The labor cost per crop acre ranged from \$9.55 on the general farms with the most livestock to \$7.64 on the hog farms. The horse and machinery cost per crop acre and the improvement cost per acre were also highest on the general farms with the most livestock but lowest on the general farms with the least livestock.

Size of farm. When the farm records in Farming-Type Area 9 are sorted according to the total acres in the farm, they indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller ones. The operators on the larger farms took in more money during the year than did those on the smaller ones; and, after deductions were made for farm business expenditures and interest on the investment, the 14 farms averaging 349 acres in size had labor and management earnings which averaged \$1,344 contrasted with \$9.47 for the 6 smallest farms. The smaller farms had higher investments per acre for land, improvements, and total investment, indicating a higher capital input. The rate earned on investment was somewhat lower for the 131 to 210 acre farms than for either of the other two groups, but there was a wide fluctuation in earnings in each size group.

The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the much higher gross earnings per acre, by the percent of tillable land in grain, by the larger amount of feed fed per acre to productive livestock, and by the higher crop yields.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1941

Item	Total acres in farm		
	Less than 131	131 to 210	211 or more
Number of farms - - - - -	6	14	14
Acres per farm - - - - -	100	170	349
<u>Investments</u>			
Total per farm- - - - -	\$ 6 609	\$ 9 522	\$17 721
Total per acre- - - - -	66	56	51
Land per acre - - - - -	31	25	26
Improvements per acre - - - - -	14	13	8
Machinery per acre- - - - -	4.92	6.30	5.76
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$ 2 316	\$ 2 589	\$ 4 473
Gross expenses- - - - -	1 455	1 836	2 709
Net earnings- - - - -	\$ 861	\$ 753	\$ 1 764
Per acre			
Gross earnings- - - - -	\$ 23.16	\$ 15.18	\$ 12.81
Gross expenses- - - - -	14.55	10.77	7.76
Net earnings- - - - -	\$ 8.61	\$ 4.41	\$ 5.05
Rate earned on investment - - - - -	13.0%	7.9%	10.0%
Labor and management earnings - - - - -	\$ 947	\$ 722	\$ 1 344
<u>Size and Intensity</u>			
Percent of land area tillable - - - - -	87.8	81.6	71.2
Percent of tillable land in grain - - - - -	42.4	38.1	38.7
Percent in hay and pasture- - - - -	42.4	50.6	50.4
Feed fed per acre to productive livestock - - - - -	\$ 9.29	\$ 4.79	\$ 4.93
Percent of income from productive livestock - - - - -	76.0	62.0	70.0
Percent of income from crops- - - - -	14.7	20.9	16.8
Months of labor per 100 crop acres- - - - -	28.5	24.7	18.9
Total months of labor - - - - -	16.9	21.9	26.6
Number of work horses - - - - -	3.0	3.4	4.1
<u>Crop Yields per Acre</u>			
Corn, bu. - - - - -	35.3	32.8	34.5
Wheat, bu.- - - - -	24.6	18.5	22.2
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 202	\$ 220	\$ 197
Hog returns per litter- - - - -	97	149	133
Dairy returns per cow - - - - -	89	90	106
<u>Expense Factors</u>			
Labor cost per crop acre- - - - -	\$ 12.64	\$ 9.79	\$ 7.90
Horse and machinery cost per crop acre- - - - -	5.61	6.33	6.74
Improvement cost per acre - - - - -	1.78	1.42	.76
Land tax per acre - - - - -	.67	.65	.53

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The method* used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and horse and machinery expenses. Labor expenses per crop acre increase as the amount of livestock per acre increases but decrease as the size of farm increases. Horse and machinery cost per crop acre, on the other hand, remained constant as the amount of livestock per acre increased and increased as the size of the farms increased. Therefore, the efficiency of a farm in the use of labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 6).

TABLE 6.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER CROP ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 9, 1941

Acres per farm	Feed fed per acre			Feed fed per acre		
	Less than \$3.00	\$3.00 to \$5.99	\$6.00 or more	Less than \$3.00	\$3.00 to \$5.99	\$6.00 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 131	\$10.10	\$12.00	\$13.00	\$5.60	\$5.60	\$5.60
131 to 210	8.00	9.80	10.40	6.30	6.30	6.30
211 or more	7.30	8.30	9.00	6.70	6.70	6.70

Producing for War Needs

In any given period gross receipts for hogs, cattle, dairy sales, eggs, and grain are relative measures of production (Table 7). Therefore the account keeper should use these standards to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

TABLE 7.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 9, 1938-1941

Item	Your farm	Average of all farms in area			
		1941	1940	1939	1938
Number of farms - - - - -	--	34	55	56	37
<u>Capital Investments</u>					
Land- - - - -	\$	\$ 6 049	\$ 5 907	\$ 5 157	\$ 6 258
Farm improvements - - - - -		2 299	2 323	3 315	2 204
Horses- - - - -		396	375	392	543
Productive livestock: Cattle- - - - -		878	786	550	539
Hogs- - - - -		199	172	235	337
Sheep - - - - -		40	35	62	27
Poultry - - - - -		97	86	91	106
Total productive livestock- - - - -	()	(1 214)	(1 079)	(938)	(1 009)
Feed and grain- - - - -		1 068	843	768	1 077
Machinery and equipment - - - - -		1 154	1 061	995	936
Automobile (farm share) - - - - -		204	145	124	128
Total - - - - -	\$	\$12 384	\$11 733	\$11 689	\$12 155
<u>Receipts and Net Increases</u>					
Horses- - - - -	\$	\$ --	\$ 1	\$ 9	\$ 11
Productive livestock: Cattle- - - - -		569	377	266	212
Dairy sales - - - - -		559	364	298	312
Hogs- - - - -		825	299	306	627
Sheep - - - - -		47	39	25	14
Poultry - - - - -		74	58	41	42
Egg sales - - - - -		186	119	124	176
Total productive livestock- - - - -	()	(2 260)	(1 256)	(1 060)	(1 383)
Farm products used in household - - - - -		278	220	229	284
Feed and grain - - - - -		591	584	779	163
Labor off farm - - - - -		29	14	21	24
Miscellaneous - - - - -		20	2	15	3
AAA payments- - - - -		137	243	259	145
Total - - - - -	\$	\$ 3 315	\$ 2 320	\$ 2 372	\$ 2 013
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$	\$ 239	\$ 50	\$ 227	\$ 145
Horses- - - - -		8	--	--	--
Productive livestock- - - - -		--	--	--	--
Feed and grain- - - - -		--	--	--	--
Machinery and equipment - - - - -		436	319	264	217
Automobile (farm share) - - - - -		99	76	74	80
Hired labor - - - - -		313	249	411	195
Miscellaneous - - - - -		18	18	25	16
Crop expense- - - - -		156	96	75	72
Livestock expense - - - - -		36	19	24	13
Taxes - - - - -		159	147	135	141
Total - - - - -	\$	\$ 1 464	\$ 974	\$ 1 235	\$ 879
Receipts less expenses- - - - -	\$	\$ 1 851	\$ 1 346	\$ 1 137	\$ 1 134
Family labor- - - - -		214	156	120	133
Returns for labor, capital, mgt.- - - - -	\$	\$ 1 637	\$ 1 190	\$ 1 017	\$ 1 001
Operator's labor- - - - -		449	374	402	388
Net earnings per farm - - - - -	\$	\$ 1 188	\$ 816	\$ 615	\$ 613
Rate Earned on Investment - - - - -	%	9.6%	7.0%	5.3%	5.0%
Interest on investment- - - - -	\$	\$ 619	\$ 587	\$ 585	\$ 608
Labor and Management Earnings - - - - -		1 018	603	432	393
Nonfarm income- - - - -	\$	\$ 90	\$ 41	\$ 147	\$ 129

1941

COMPLETE COSTS AND FARM BUSINESS ANALYSIS

ON 28 FARMS

IN CHAMPAIGN AND PIATT COUNTIES, ILLINOIS

(Grain-Farming Section)

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August 1942
AE-1878

COMPLETE COSTS AND FARM BUSINESS ANALYSIS ON 28 FARMS IN CHAMPAIGN AND PIATT COUNTIES, ILLINOIS, 1941

By

R. H. Wilcox, W. C. Kayser, and H. C. M. Case

INTRODUCTION

During 1941 complete farm cost-accounting records were kept by 28 farmers in Champaign and Piatt Counties in cooperation with the Department of Agricultural Economics of the University of Illinois. The costs and results secured on these farms are set forth in this report, which covers the twenty-ninth year of a continuous farm cost study in Illinois.^{1/}

This report gives the costs for individual farms and averages for the group for 1941 as well as comparable averages for the two preceding years. Since the figures represent only one area, the reader should keep in mind the soil and climatic characteristics of the area and the yields of crops during the years for which costs are shown.

The Area Studied

Champaign and Piatt Counties lie in east-central Illinois, close to the Illinois-Indiana line, and are typical of the cash-grain area of the state. This section of Illinois is commonly called the corn and soybean section because the combined sales of these two crops amount to more than the income from any other single enterprise. The soil is high in natural fertility, and the land is practically all tillable.

Farms Included in the Study

The farms in the study are about 90 acres larger than the average-sized farm in the two counties. The farmers who cooperate in the study also secure somewhat higher yields and have better managed farms than does the average farmer in the area. As a result, it is believed that they have somewhat lower costs than do many of their neighbors. However, it is felt that the data from the cost farms may safely be used for showing variations in costs from farm to farm or from year to year.

Conditions During 1941

The year 1941 was one of high average temperature, which was favorable to the yield of corn but not to the yield of oats and winter wheat. Spring work progressed in good shape, and the summer harvesting of grain and hay was carried on without unusual weather interference. In October and November, however, excessively wet weather hindered the harvesting of corn and soybeans, as well as fall plowing and the seeding of winter grain. The cost of harvesting soybeans and corn was high on some farms where the ground was soft as the result of continued fall rains.

Wage rates of farm labor in Illinois rose 13 percent in 1941 over their level in 1940, whereas average hourly wage rates of farm laborers on the farms in this study rose 14.4 percent. (See page 39.)

^{1/} Crop costs for the first 25 years were recently published in Illinois Bulletin 467.

Table 1.--Distribution of Land in Cost-Accounting Farms,
Champaign and Piatt Counties

Use of land	Acres per farm	
	1940	1941
Harvested crops	221.6	235.3
Rotation pasture	23.7	25.8
Soil-conserving crops (not harvested)	20.7	12.8
Bluegrass pasture	10.0	9.0
Farmstead	6.4	6.9
Idle land	.7	--
Total acres in farm	265.6	289.8

The average-sized farm operated by the cooperating farmer in Champaign and Piatt Counties was 25 acres larger in 1941 than in 1939 and four acres larger in 1941 than in 1940. Cooperators were selected with a view to including farms of differing sizes in order to provide a better means of studying farm organization. The smallest farm in 1941 contained 79 acres; the largest farm, 563 acres.

The acreage shown in Table 2 in soil-conserving crops (not harvested) does not include all land that came under the classification of soil-conserving acreage. A considerable area of soil-conserving land was in rotation pasture.

Table 2.--Distribution of Crop Area, Average Crop Yields, and Crop Costs on Cost-Accounting Farms, Champaign and Piatt Counties

Crop	Percent of cropland		Average yield per acre		Average net cost per bushel or ton		Variation in cost per bushel or ton in 1941	
	1940	1941	1940	1941	1940	1941	High	Low
Corn	34.85	35.08	55.95	72.42	\$.335	\$.268	\$.425	\$.207
Oats (combined)	4.97	10.34	66.49	41.18	.193	.317	.435	.233
Oats (threshed)	4.87	4.00	69.44	54.91	.229	.262	.308	.213
Soybeans (combined)	29.94	31.53	21.52	28.56	.738	.595	.819	.463
Winter wheat (combined)	5.55	6.22	26.56	24.16	.560	.606	.803	.456
Alfalfa hay	2.56	2.42	2.35	3.07	9.00	7.80	10.27	5.56
Clover hay	4.84	2.67	1.30	1.18	11.73	12.37	14.46	8.91
Soybean hay	2.16	.46	1.56	1.84	12.36	13.92	21.45	5.20
Other crops	.86	3.09	--	--	--	--	--	--
Soil-conserving crops (not harvested)	9.40	4.19	--	--	--	--	--	--

The average unit cost per bushel or ton of crop products in 1941 showed a varied relation to costs of these same crops in 1940. The cost of producing a unit of corn, soybeans, and alfalfa hay declined, whereas the cost per unit of the other principal crops increased in varying amounts.

The term "cropland" used in Table 2 includes only the land that was harvested by labor and not that used for pasture. The land harvested comprised about 80 percent of the farm area. Although the proportion in cropland in 1941 was 2.2 percent lower than in 1940, the percentage devoted to the production of grain crops was somewhat higher in 1941.

CROP PRODUCTION COSTS

When the costs of individual products are presented, wide margins appear between the cost of production and the price of some products. This situation is somewhat misleading, however, since some crops show a much larger profit than others. Also, the more profitable crops in the rotation, such as corn and soybeans, draw more heavily on soil fertility than do the less profitable small grains and hays. No attempt was made, in arriving at the crop costs given in this report, to charge for the fertility removed from the soil, because no satisfactory method of doing so has yet been found. If a charge had been made for the fertility depletion of corn and soybeans, the margin between cost of production and prices of these crops would have been narrowed considerably.

In the interest of good farming and the continued low cost of production, it is necessary to include small grains as nurse crops and clovers as soil-building crops. Both groups are less profitable than corn and soybeans, for example, but all of them are needed to make the rotation as a whole profitable over a period of years. The farmers in this study are doing a better-than-average job of developing rotations that result in low costs of production and continued high yields; therefore the earnings shown are much higher than those found on the average farm of the area. The cost records show the ways in which farmers can economize in their operations and the degree to which profitable practices affect farm income.

Corn

Because 1941 was an unusually good corn year and because all the farmers used hybrid seed corn, the acre yield of corn was the highest obtained on farms in this area of the state cooperating in the cost work since its beginning in 1920. The average acre cost of producing corn in 1941 was \$19.67. With an average yield of over 72 bushels an acre, the bushel cost was 26.8 cents. In 1940 a yield of 56 bushels gave a bushel cost of 33.5 cents; and in 1939 a yield of 62.5 bushels, a cost of 28.6 cents a bushel. It seems apparent, since acre costs have not varied much for the past three years, that in that period yields have been the most important factor in bushel costs. Because of good yields and improvement in prices, the 1941 corn crop showed the highest profit of any year during the history of the work. Corn parity payments under the soil conservation program were not credited to the field accounts; hence they do not enter into the crop incomes reported.

Oats (Combined)

The practice of combining oats expanded a great deal in 1941, and the method by which it was done changed entirely. Whereas in previous years much of the crop was combined from the standing grain, in 1941 nearly all the oats combined were windrowed and combined out of the windrow. The acreage increased for the first time in many years. All of the increase can be credited to the use of oats as a nurse crop for the legumes seeded to meet, in part at least, the required soil-conserving practices under the agricultural program. The acre cost of producing and combining oats was \$13.95 in 1941 and was \$13.87 in 1940. With an acre yield of 41.2 bushels in 1941, the cost per unit was 31.7 cents compared with 19.3 cents a bushel in 1940, when the acre yield was 66.5 bushels.

Oats (Threshed)

The acre yield of oats cut with the binder and threshed was 55 bushels, or nearly 14 bushels an acre more than the yield of oats windrowed and combined. This difference in yield can be attributed very largely to the fact that more livestock has been kept during the past years on the eight farms where the oats were threshed than on the farms where oats were combined, and the operators of the eight farms made more use of rotation pastures and barnyard manure.

The average acre cost of producing threshed oats was \$16.82 and the income, \$19.47, so the acre profit was \$2.65.

Soybeans (Combined)

Soybeans were produced on all the farms; their acreage per farm varied from 18.33 on the farm with the least soybeans to 148.26 on the farm with the most soybeans. The yield of beans suffered from the extremely wet fall and the farmers' inability to get into the fields with the combine before the beans had shattered. From a yield standpoint, however, the 1941 crop was better than that of 1940. Although the acre cost of soybeans in 1941 was above that of both 1939 and 1940, the profit per acre of \$25.84 was considerably higher. This profit was based upon a price of \$1.50 a bushel which prevailed at harvest time.

Less soybean acreage was planted in rows in 1941 on the farms than in 1940. The hours of man and tractor use, however, were about the same in the two years because of the very unfavorable harvesting season of 1941.

Winter Wheat (Combined)

Winter wheat was grown on 13 of the 28 farms. Yields varied from 7.7 to 31.7 bushels, which was a wider spread than usually occurs. Yields of over 16 bushels, combined with the price of 95 cents which prevailed at the time of harvest, returned a profit to cooperating farmers in the two counties. The average acre cost was \$15.58, and with a yield of 24.2 bushels an acre the average bushel cost was 60.6 cents, or nearly five cents above that of the previous year.

Alfalfa Hay

Eighteen of the 28 farms raised an average of 9.25 acres of alfalfa hay. This was a slight increase in acreage over that of 1940 and a substantial increase over the acreage during the '30s. The 1941 yield per acre of 3.1 tons was the highest realized from the crop in the area since the cost studies began in 1920. Although the yields in this area have not been large, the crop has usually shown a profit; and in 1941, with a better-than-average yield and a price of \$10.50 a ton at haying time, an acre profit of \$8.03 was realized. Many farmers in this area of the state do not raise alfalfa because they do not have livestock to utilize it and because the local demand for the crop is somewhat limited; yet when it has been grown on farms where it can be utilized, it has proved to be a profitable crop in this cash-grain area.

Clover Hay

Results on the nine farms that grew clover hay in 1941 were typical in that the yield per acre was 1.2 tons and the cost per acre, \$13.16. Clover hay on these farms does not furnish roughage as economically as the alfalfa crop, nor is there as much profit in clover hay as in alfalfa hay when considered only on a dollars and cents basis. Farmers in this area, however, raise clover as much for its soil-building worth as for its use as hay. Thus it is often the practice to cut only one crop of hay and to turn the second under for soil-building purposes.

Soybean Hay

Only eight of the 28 cooperating farmers cut soybeans for hay in 1941, whereas in previous years nearly every farmer cut some soybeans for hay, even if it was only a couple of mower widths around a large field to open it up for the combine, or a small portion of a large field in order to come within the acreage allotment of the soil conservation program. During 1941 the acreage restrictions on soybeans under the soil conservation program were removed, and farmers who in the past had been conforming under the program were permitted to combine all their soybeans without penalty.

Because of the very favorable price in the fall, there was a decided advantage in combining the 1941 soybeans instead of cutting them for hay. Hence only the poor beans and weedy spots in soybean fields that were difficult to combine were cut for hay.

CORN (HUSKED IN FIELD)
Table 3.--Cost of Production (acre basis) on 27 farms (2,175.48 acres; 157,557 bushels)
Champaign-Platt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number									
	94	93	89	56	92	27	47	15	91	67
Acres in corn	49.70	156.51	110.05	98.09	170.91	49.69	52.69	92.22	102.43	56.52
Yield per acre (bu.)	62.68	98.79	85.06	82.57	86.30	81.40	68.89	82.74	64.78	58.92
Labor per acre										
Man labor	4.81	5.44	5.76	5.31	9.16	6.79	5.76	7.88	6.40	5.68
Horse labor	.80	1.18	1.55	.10	5.10	4.07	3.66	1.53	--	--
Tractor hours	3.43	4.11	4.86	4.51	4.16	4.88	4.93	5.12	5.51	5.08
Truck miles	--	.15	.27	--	2.92	4.02	--	--	.49	--
COST ITEMS PER ACRE										
Growing cost										
Man labor	\$.97	\$.92	\$ 1.04	\$.82	\$ 1.26	\$ 1.37	\$ 1.09	\$ 1.46	\$ 1.56	\$.99
Horse labor	.44	--	--	--	--	.52	.45	.20	--	--
Tractor use	1.02	1.47	1.48	1.50	1.81	1.82	1.73	1.98	1.63	1.44
Truck use	--	--	.01	--	.09	--	--	--	.03	--
Machinery	.59	.94	.60	1.33	1.07	1.18	.90	.86	.79	.45
Seed	.79	1.08	.84	.58	.90	.99	.74	1.17	.95	.79
Fertilizer	.82	2.93	.83	2.36	.56	.60	.12	2.12	1.14	.80
Hail insurance	--	.30	--	--	.26	--	.55	--	--	--
Gen'l farm expense	.94	1.20	1.72	.95	1.42	1.82	.91	1.76	1.13	1.38
Total growing cost	\$5.57	\$8.84	\$6.52	\$7.54	\$7.38	\$8.30	\$6.49	\$9.55	\$7.23	\$5.85
Harvesting cost										
Man labor	\$.53	\$ 1.11	\$.70	\$.79	\$ 1.86	\$.80	\$.70	\$ 1.37	\$.99	\$.79
Horse labor	--	.29	.59	.01	1.02	.98	.92	--	--	--
Tractor use	.48	.98	.71	1.12	.84	.85	1.12	1.59	.89	.83
Picker	.67	1.05	.98	1.04	.44	1.07	.98	1.00	.83	.63
Truck use	--	.01	.01	--	--	.30	--	--	.03	--
Total harvesting cost	\$1.68	\$3.44	\$2.99	\$2.96	\$4.16	\$4.00	\$3.72	\$3.96	\$2.74	\$2.25
Cost of growing and harvesting										
Taxes	\$ 7.25	\$ 12.28	\$ 9.51	\$ 10.50	\$ 11.54	\$ 12.30	\$ 10.21	\$ 13.51	\$ 9.97	\$ 8.10
Interest on land	1.85	1.42	1.40	1.44	.85	1.69	1.66	1.86	1.76	1.91
TOTAL COST	6.32	7.50	7.50	6.75	7.50	7.50	6.25	6.57	5.93	6.50
INCOME PER ACRE	\$15.42	\$21.20	\$18.41	\$18.69	\$19.89	\$21.49	\$18.12	\$21.94	\$17.66	\$16.51
Grain	\$41.99	\$66.19	\$56.99	\$55.32	\$57.82	\$54.54	\$46.16	\$55.43	\$43.40	\$39.47
Pasture	2.46	.31	.37	.01	.05	.17	.01	.10	.17	.52
TOTAL INCOME	\$44.45	\$66.50	\$57.36	\$55.33	\$57.87	\$54.71	\$46.17	\$55.53	\$43.57	\$40.00
NET PROFIT PER ACRE	\$29.03	\$45.30	\$38.95	\$36.64	\$37.98	\$33.22	\$28.05	\$33.59	\$25.91	\$23.49
NET COST PER BUSHEL	.207	.211	.212	.226	.230	.262	.263	.264	.270	.271

Table 3.--Cost of Production (acre basis) on 27 farms (2,175.48 acres; 157,557 bushels) in Champaign-Platt Counties, 1941 (Farms ranked in order of net cost per bushel)

CORN (HUSKED IN FIELD) (cont'd)
 Table 3.--Cost of Production (acre basis) on 27 farms (2,175.48 acres; 157,557 bushels)
 Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number									
	84	64	83	75	45	63	95	60	49	79
Acres in corn	107.41	76.65	42.79	62.47	100.27	101.63	77.52	58.02	95.89	25.62
Yield per acre (bu.)	66.77	69.45	59.83	71.18	72.80	62.63	61.98	79.86	72.34	73.63
Labor per acre										
Man labor	5.53	8.26	7.92	10.00	6.95	6.41	5.97	3.90	6.75	10.49
Horse labor	2.95	--	3.93	8.45	--	.39	3.10	.01	2.89	--
Tractor hours	4.50	5.33	5.52	4.53	5.69	5.95	3.85	5.05	5.26	6.26
Truck miles	--	--	.14	--	3.16	--	--	--	.26	--
COST ITEMS PER ACRE										
Growing cost										
Man labor	\$.83	\$1.07	\$1.33	\$1.71	\$.88	\$1.08	\$.89	\$1.30	\$1.24	\$1.56
Horse labor	.08	--	--	.38	--	--	.22	--	--	--
Tractor use	1.34	1.62	2.29	1.30	1.63	1.71	1.59	2.12	1.93	1.90
Truck use	--	--	--	--	.12	--	--	--	--	--
Machinery	.82	.66	1.38	1.06	1.24	.70	.77	1.07	1.36	.73
Seed	.65	.74	.63	.99	.91	.77	1.06	.73	1.03	.78
Fertilizer	1.17	.62	.77	2.85	.92	1.13	.68	2.08	1.32	5.44
Hail insurance	.23	--	--	--	--	--	.33	--	--	--
Gen'l farm expense	1.26	1.68	1.11	1.40	1.35	1.23	1.25	1.23	2.54	.82
Total growing cost	\$6.38	\$6.39	\$7.51	\$9.69	\$7.05	\$6.62	\$6.79	\$8.53	\$9.42	\$11.23
Harvesting cost										
Man labor	\$.83	\$1.52	\$1.13	\$1.24	\$1.29	\$.82	\$.79	\$1.20	\$1.10	\$1.62
Horse labor	.27	--	.59	.36	--	.18	.37	1.12	.53	--
Tractor use	1.12	.94	.69	.45	1.86	1.14	.86	.77	1.09	1.09
Picker	1.58	1.21	.79	.98	1.50	1.04	1.06	1.24	1.37	1.21
Truck use	--	--	.01	--	.04	--	--	--	.04	--
Total harvesting cost	\$3.80	\$3.67	\$3.21	\$3.03	\$4.69	\$3.18	\$3.08	\$4.33	\$4.13	\$3.98
Cost of growing and harvesting										
Taxes	\$10.18	\$10.06	\$10.72	\$12.72	\$11.74	\$9.80	\$9.87	\$12.86	\$13.55	\$15.21
Interest on land	1.65	1.35	1.02	1.31	1.40	1.30	1.50	2.03	1.40	1.51
TOTAL COST	6.50	7.03	5.27	5.92	7.50	6.75	6.25	7.50	6.25	5.83
TOTAL COST	\$18.33	\$18.44	\$17.01	\$19.95	\$20.64	\$17.85	\$17.62	\$22.39	\$21.20	\$22.55
INCOME PER ACRE										
Grain	\$44.74	\$45.19	\$40.08	\$47.69	\$48.78	\$41.96	\$41.53	\$52.16	\$48.47	\$49.34
Pasture	.12	--	.33	--	.22	.11	.01	.02	--	.02
TOTAL INCOME	\$44.86	\$45.19	\$40.41	\$47.69	\$49.00	\$42.07	\$41.54	\$52.18	\$48.47	\$49.36
NET PROFIT PER ACRE	\$26.53	\$26.75	\$23.40	\$27.74	\$28.36	\$24.22	\$23.92	\$29.79	\$27.27	\$26.81
NET COST PER BUSHEL	\$.273	\$.273	\$.279	\$.280	\$.280	\$.283	\$.284	\$.287	\$.293	\$.306

CORN (HUSKED IN FIELD) (cont'd)
Table 3.--Cost of Production (acre basis) on 27 farms (2,175.48 acres; 157,557 bushels)
Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number							1941	1940	1939
	66	72	62	74	90	71	73	average 27 farms	average 30 farms	average 29 farms
Acres in corn	81.77	117.28	70.86	36.90	99.41	63.27	18.90	80.57	80.51	80.70
Yield per acre (bu.)	65.45	54.43	67.02	74.36	60.01	64.25	57.14	72.42	55.95	62.48
Labor per acre										
Man labor	9.72	6.13	13.29	12.16	14.44	11.76	10.79	7.72	7.40	8.08
Horse labor	2.63	2.00	12.19	4.49	22.36	13.77	8.46	3.76	4.34	6.47
Tractor hours	6.28	5.35	5.14	8.34	3.01	2.48	7.62	4.86	4.56	4.23
Truck miles	--	1.17	--	--	--	--	--	.59	.31	.29
COST ITEMS PER ACRE										
Growing cost										
Man labor	\$1.25	\$.92	\$1.21	\$1.54	\$2.00	\$1.96	\$1.82	\$1.20	\$1.27	\$1.10
Horse labor	--	--	.24	.35	.56	1.68	.31	.16	.41	.42
Tractor use	2.01	1.76	1.41	3.05	1.84	1.69	2.47	1.70	1.77	1.66
Truck use	--	.04	--	--	--	--	--	.02	.01	.02
Machinery	.90	.52	.67	.86	.48	.92	1.33	.88	.92	.81
Seed	.92	.62	.49	.91	.68	.62	.74	.83	.80	.75
Fertilizer	2.15	1.04	1.68	1.56	1.15	2.45	2.66	1.44	1.09	.89
Hail insurance	--	--	--	--	--	--	--	.08	.09	.04
Gen'l farm expense	1.67	1.03	2.46	1.83	2.13	1.73	1.48	1.47	1.61	1.46
Total growing cost	\$8.90	\$5.93	\$8.16	\$10.10	\$8.84	\$11.05	\$10.81	\$7.78	\$7.97	\$7.15
Harvesting cost										
Man labor	\$1.81	\$.78	\$2.20	\$ 2.30	\$2.32	\$ 2.76	\$ 1.57	\$1.28	\$.82	\$.96
Horse labor	.82	.27	.91	.86	1.16	1.43	1.41	.48	.61	.71
Tractor use	1.31	1.11	1.21	2.76	--	.09	1.27	.98	.57	.59
Picker	.70	1.05	.85	1.26	--	.32	.93	.94	.91	.95
Truck use	--	.04	--	--	--	--	--	.02	.01	.02
Total harvesting cost	\$4.64	\$3.25	\$5.17	\$7.18	\$3.48	\$4.60	\$5.18	\$3.70	\$2.92	\$3.23
Cost of growing and harvesting										
Taxes	\$13.54	\$ 9.18	\$13.33	\$17.28	\$12.32	\$15.65	\$15.99	\$11.48	\$10.89	\$10.38
Interest on land	1.38	1.64	2.03	1.61	2.05	1.50	1.54	1.52	1.43	1.36
TOTAL COST	5.75	6.40	6.25	6.50	6.14	6.25	6.75	6.67	6.65	6.64
INCOME PER ACRE	\$20.67	\$17.22	\$21.61	\$25.39	\$20.51	\$23.40	\$24.28	\$19.67	\$18.97	\$18.38
Grain	\$43.85	\$36.47	\$44.90	\$49.83	\$40.21	\$43.05	\$38.28	\$48.52	\$29.65	\$28.11
Pasture	--	.02	.32	1.31	.53	.79	.02	.24	.23	.49
TOTAL INCOME	\$43.85	\$36.49	\$45.22	\$51.14	\$40.74	\$43.84	\$38.30	\$48.76	\$29.88	\$28.60
NET PROFIT PER ACRE	\$23.18	\$19.27	\$23.61	\$25.75	\$20.23	\$20.44	\$14.02	\$29.09	\$10.91	\$10.22
NET COST PER BUSHEL	\$136	\$116	\$118	\$134	\$147	\$138	\$145	\$115	\$133	\$128

Table 4.--Cost of production (acre basis) on 20 farms (679.23 acres; 27,970 bushels)
Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number							
	92	47	71	94	89	83	84	67
Acres in oats	47.14	34.48	8.00	16.43	52.07	20.83	23.00	32.15
Yield per acre (bu.)	56.49	47.40	56.00	35.00	43.44	40.81	47.09	37.33
Labor per acre								
Man hours	2.84	.62	.97	4.02	1.95	2.74	1.88	2.61
Horse hours	1.48	1.17	2.41	--	.91	--	.41	--
Tractor hours	1.38	.87	1.53	2.77	1.05	1.92	1.33	1.80
Truck miles	1.06	--	--	--	.72	.19	--	1.34
COST ITEMS PER ACRE								
Growing cost								
Man labor	\$.36	\$.16	\$.35	\$.58	\$.19	\$.35	\$.25	\$.30
Horse labor	.14	.07	.09	--	.17	--	.05	--
Tractor use	.45	.25	.76	.83	.18	.61	.35	.44
Truck use	--	--	--	--	--	--	--	.02
Machinery	.13	.11	.17	.14	.13	.27	.16	.15
Seed	.95	1.21	1.50	.82	1.13	1.11	1.09	.80
Fertilizer	.32	.07	1.40	.47	.47	.44	.67	.46
Insurance	--	.14	--	--	--	--	--	--
Gen'l farm expense	.44	.26	.54	.77	.60	.38	.43	.65
Total growing cost	\$2.79	\$2.27	\$4.81	\$3.61	\$2.87	\$3.16	\$3.00	\$2.82
Harvesting cost								
Man labor	\$.52	\$.37	\$.68	\$.70	\$.41	\$.52	\$.36	\$.53
Horse labor	.16	.37	.45	--	.18	--	--	--
Tractor use	.42	.28	.27	.48	.28	.45	.40	.45
Truck use	.03	--	--	--	.04	.02	--	.04
Combine	.88	1.31	.91	.86	.74	.47	1.05	.93
Total harvesting cost	\$2.01	\$2.33	\$2.31	\$2.04	\$1.65	\$1.46	\$1.81	\$1.95
Cost of growing and harvesting	\$4.80	\$4.60	\$7.12	\$5.65	\$4.52	\$4.62	\$4.81	\$4.77
Taxes	.85	1.66	1.51	1.85	1.40	1.02	1.65	1.91
Interest on land	7.50	6.25	6.25	6.50	7.50	6.00	6.50	6.50
TOTAL COST	\$13.15	\$12.51	\$14.88	\$14.00	\$13.42	\$11.64	\$12.96	\$13.18
INCOME PER ACRE								
Grain	\$17.51	\$14.70	\$17.36	\$10.85	\$13.47	\$12.65	\$14.60	\$11.57
Straw	--	--	--	1.71	--	.48	--	.70
Pasture	--	--	--	2.80	1.63	--	--	2.15
TOTAL INCOME	\$17.51	\$14.70	\$17.36	\$15.36	\$15.10	\$13.13	\$14.60	\$14.42
NET PROFIT PER ACRE	\$4.36	\$2.19	\$2.48	\$1.36	\$1.68	\$1.49	\$1.64	\$1.24
NET COST PER BUSHEL	\$.233	\$.264	\$.266	\$.271	\$.271	\$.273	\$.275	\$.277

OATS (COMBINED) (cont'd)

Table 4.--Cost of production (acre basis) on 20 farms (679.23 acres; 27,970 bushels)
Champaign-Platt Counties--1941 (Farms ranked in order of net cost per bushel)

[illegible]

Items	Farm number				1941	1940	1939
	79	66	80	62a/	75a/	average of 14 farms	average of 16 farms
Acres in oats	15.52	48.75	25.44	25.41	6.63	26.91	24.01
Yield per acre (bu.)	35.50	30.50	40.64	13.73	6.03	66.49	25.20
Labor per acre							
Man hours	4.06	2.89	6.47	3.04	6.94	3.11	2.56
Horse hours	--	1.39	--	.21	.60	.74	.76
Tractor hours	2.08	1.84	3.97	2.94	2.41	1.57	1.34
Truck miles	.48	--	.39	--	1.36	.66	.41
COST ITEMS PER ACRE							
Growing cost							
Man labor	\$.46	\$.24	\$.52	\$.49	\$.18	\$.28	\$.25
Horse labor	--	.15	--	.02	.05	.05	.06
Tractor use	.54	.32	.68	.78	.11	.41	.49
Truck use	--	--	--	--	--	--	--
Machinery	.26	.18	.26	.30	.15	.22	.24
Seed	.82	1.31	1.19	1.28	.62	1.15	.85
Fertilizer	2.80	.43	1.33	.96	1.51	.74	.66
Insurance	--	.32	--	--	--	.03	--
Gen'l farm expense	.32	.53	.83	.56	.97	.54	.45
Total growing cost	\$5.20	\$3.48	\$4.81	\$4.39	\$3.59	\$3.42	\$3.00
Harvesting cost							
Man labor	\$.79	\$.68	\$1.51	\$.26	\$1.85	\$.62	\$.37
Horse labor	--	.28	--	--	--	.17	.07
Tractor use	.49	.56	1.24	.44	.74	.46	.28
Truck use	.02	--	.02	--	.09	.03	.04
Combine	1.96	1.21	2.16	1.24	1.77	1.03	1.14
Total harvesting cost	\$3.26	\$2.73	\$4.93	\$1.94	\$4.45	\$1.99	\$1.90
Cost of growing and harvesting							
Taxes	\$8.46	\$6.21	\$9.74	\$6.33	\$8.04	\$5.73	\$4.90
Interest on land	1.51	1.38	1.46	2.04	1.21	1.46	1.47
TOTAL COST	4.84	5.75	6.50	6.25	5.50	6.73	6.62
INCOME PER ACRE	\$14.81	\$13.34	\$17.70	\$14.62	\$14.75	\$13.95	\$12.99
Grain	\$11.01	\$ 9.45	\$12.60	\$ 4.26	\$ 1.87	\$12.76	\$ 5.80
Straw	--	.54	--	--	--	.20	.05
Pasture	--	--	.01	.67	--	.68	.60
TOTAL INCOME	\$11.01	\$ 9.99	\$12.61	\$ 4.93	\$ 1.87	\$13.64	\$ 6.45
NET PROFIT PER ACRE	\$-3.80	\$-3.35	\$-5.09	\$-9.69	\$-12.88	\$-4.47	\$-6.54
NET COST PER BUSHEL	\$.417	\$.420	\$.435	\$ 1.015	\$ 2.445	\$.317	\$.490

a/ Not included in the average

OATS (THRESHED)
Table 5.--Cost of Production (acre basis) on 8 farms (274.82 acres; 15,092 bushels)
Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number								1941 ave. of 8 farms	1940 ave. of 14 farms	1939 ave. of 12 farms
	74	93	89	15	90	72	71	84			
Acres in oats	33.14	45.71	19.99	57.24	63.02	22.96	17.09	15.67	34.35	26.37	26.58
Yield per acre	69.31	61.69	57.43	50.03	45.64	55.92	61.56	47.92	54.91	69.44	38.34
Labor per acre											
Man hours	7.65	6.35	6.24	2.55	6.04	9.62	9.19	6.46	6.09	7.06	5.41
Horse hours	9.84	3.50	3.34	1.10	4.78	6.44	7.77	3.48	3.62	4.11	3.83
Tractor hours	2.62	.76	2.51	1.15	1.67	1.39	1.67	1.21	1.54	1.63	1.42
Truck miles	--	1.09	1.06	.89	--	.44	--	--	.48	.14	--
COST ITEMS PER ACRE											
Growing cost											
Man labor	\$.33	\$.17	\$.19	\$.36	\$.33	\$.22	\$.36	\$.25	\$.29	\$.27	\$.27
Horse labor	--	.06	.17	--	.13	.07	.09	.05	.07	.07	.13
Tractor use	.66	.11	.18	.39	.30	.30	.75	.36	.35	.42	.41
Truck use	--	.01	--	--	--	--	--	--	--	--	--
Machinery	.52	.13	.13	.37	.08	.14	.17	.16	.22	.22	.19
Seed	1.64	.93	1.13	1.24	.79	1.34	1.49	1.09	1.14	1.25	.83
Fertilizer	.89	1.68	.47	1.21	.66	.59	1.40	.67	1.00	.86	.84
Gen'l farm expense	1.12	1.39	1.90	.56	.89	1.60	1.43	1.47	1.13	1.32	.94
Total growing cost	\$5.16	\$4.48	\$4.17	\$4.13	\$3.18	\$4.26	\$5.69	\$4.05	\$4.20	\$4.41	\$3.61
Harvesting cost											
Man labor	\$2.08	\$2.06	\$1.74	\$.57	\$1.51	\$2.69	\$2.40	\$1.75	\$1.66	\$1.74	\$1.04
Horse labor	1.02	.81	1.11	.01	.24	.79	1.67	.36	.59	1.07	.45
Tractor use	1.27	.30	.93	.29	.61	.44	.80	.31	.58	.49	.35
Truck use	--	.04	.06	.04	--	.04	--	--	.02	.01	--
Machinery	.55	.30	.69	.28	.25	.47	.63	.33	.38	.37	.65
Threshing	.75	.49	.34	.37	.91	.83	1.39	1.20	.70	1.16	.82
Twine	.35	.38	.28	.21	.24	.26	.26	.34	.28	.28	.18
Total harvesting cost	\$6.02	\$4.38	\$5.15	\$1.77	\$3.76	\$5.52	\$7.15	\$4.29	\$4.21	\$5.12	\$3.49
Cost of growing and harvesting	\$11.18	\$8.86	\$9.32	\$5.90	\$6.94	\$9.78	\$12.84	\$8.34	\$8.41	\$9.53	\$7.10
Taxes	1.61	1.42	1.40	1.86	2.04	1.65	1.50	1.65	1.71	1.51	1.44
Interest on land	6.50	7.50	7.50	6.76	6.14	6.50	6.25	6.50	6.70	6.67	6.68
TOTAL COST	\$19.29	\$17.78	\$18.22	\$14.52	\$15.12	\$17.93	\$20.59	\$16.49	\$16.82	\$17.71	\$15.22
INCOME PER ACRE											
Grain	\$21.49	\$19.13	\$17.80	\$15.51	\$14.14	\$17.34	\$19.08	\$14.86	\$17.02	\$18.06	\$8.82
Straw	2.26	2.73	2.91	1.00	1.11	.97	1.90	1.75	1.70	1.42	.94
Pasture	2.27	1.18	1.63	--	.71	--	--	--	.75	.38	.55
TOTAL INCOME	\$26.02	\$23.04	\$22.34	\$16.51	\$15.96	\$18.31	\$20.98	\$16.61	\$19.47	\$19.86	\$10.31
NET PROFIT PER ACRE	\$6.73	\$5.26	\$4.12	\$1.99	\$1.84	\$3.38	\$3.29	\$1.12	\$2.65	\$2.15	\$4.01

Table 6.--Cost of production (acre basis) on 28 farms (2,168.17 acres; 61,913 bushels)
Champaign-Platt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number							
	83	93	15	67	63	64	74	80
Acres in soybeans	24.67	136.63	60.19	64.15	91.46	52.99	126.11	60.09
Yield per acre (bu.)	29.19	36.98	36.15	27.97	29.64	33.12	34.14	32.22
Labor per acre	3.24	3.45	3.86	2.59	3.68	6.12	6.43	3.42
Man hours	--	.60	--	--	--	--	--	--
Horse hours	2.55	2.65	2.68	2.49	3.25	3.58	3.24	2.55
Tractor hours	.73	1.06	1.86	1.11	2.95	--	2.10	2.30
Truck miles								
COST ITEMS PER ACRE								
Growing cost								
Man labor	\$.49	\$.89	\$.81	\$.50	\$.71	\$.94	\$1.41	\$.58
Horse labor	--	.09	--	--	--	--	--	--
Tractor use	.86	1.07	1.15	.72	1.18	1.17	1.74	.86
Truck use	--	--	--	--	--	--	--	--
Machinery	.49	.87	.73	.30	.29	.47	.79	.91
Seed	2.11	1.87	2.60	1.76	2.02	2.11	2.20	2.19
Fertilizer	.44	1.68	1.21	.46	.65	.36	.89	1.33
Hail insurance	--	.22	--	--	--	--	--	--
Gen'l farm expense	.45	.75	.83	.64	.71	1.27	.94	.43
Total growing cost	\$4.84	\$7.44	\$7.33	\$4.38	\$5.56	\$6.32	\$7.97	\$6.30
Harvesting cost								
Man labor	\$.54	\$.39	\$.57	\$.32	\$.40	\$.99	\$.61	\$.49
Horse labor	--	.06	--	---	--	--	--	--
Tractor use	.56	.41	.43	.51	.40	.53	.52	.42
Truck use	.06	.04	.08	.05	.16	--	.14	.12
Combine	.48	.64	1.64	.90	.96	.97	.66	1.94
Total harvesting cost	\$1.64	\$1.54	\$2.72	\$1.78	\$1.92	\$2.49	\$1.93	\$2.97
Cost of growing and harvesting	\$6.48	\$8.98	\$10.05	\$6.16	\$7.48	\$8.81	\$9.90	\$9.27
Taxes	1.02	1.42	1.86	1.91	1.30	1.35	1.61	1.46
Interest on land	6.00	7.50	6.75	6.50	6.75	7.17	6.50	6.50
TOTAL COST	\$13.50	\$17.90	\$18.66	\$14.57	\$15.53	\$17.33	\$18.01	\$17.23
INCOME PER ACRE								
Grain	\$43.78	\$55.46	\$54.23	\$41.96	\$44.46	\$49.68	\$51.21	\$48.33
Pasture	--	.24	--	--	.05	--	.03	.05
TOTAL INCOME	\$43.78	\$55.70	\$54.23	\$41.96	\$44.51	\$49.68	\$51.24	\$48.38
NET PROFIT PER ACRE	\$30.28	\$37.80	\$35.57	\$27.39	\$28.98	\$32.35	\$33.23	\$31.15
NET COST PER BUSHEL	\$.463	\$.478	\$.516	\$.521	\$.522	\$.523	\$.527	\$.533

SOYBEANS (COMBINED) (cont'd)
 Table 6.--Cost of production (acre basis) on 28 farms (2,168.17 acres; 61,913 bushels)
 Champaign-Platt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number							
	89	60	84	45	91	92	90	56
Acres in soybeans	74.19	37.67	112.63	110.24	43.41	148.26	90.88	91.00
Yield per acre (bu.)	32.28	36.66	30.91	31.39	27.44	27.66	28.53	29.02
Labor per acre								
Man hours	4.43	5.27	4.48	4.48	3.98	4.20	5.77	3.86
Horse hours	.01	--	--	--	--	--	.59	.09
Tractor hours	3.16	3.82	2.95	2.56	2.83	2.60	2.89	2.63
Truck miles	2.31	3.16	--	5.08	1.34	7.20	.39	1.69
COST ITEMS PER ACRE								
Growing cost								
Man labor	\$.84	\$1.05	\$.89	\$.85	\$.92	\$.80	\$1.39	\$.68
Horse labor	--	--	--	--	--	--	.04	.01
Tractor use	.96	1.71	1.15	1.21	1.20	1.33	1.36	1.02
Truck use	.02	--	--	.01	--	.11	--	--
Machinery	.51	.57	.65	.92	.58	.83	.66	1.05
Seed	2.53	2.48	2.31	2.16	2.06	1.63	1.50	2.26
Fertilizer	.47	1.18	.67	.53	.65	.32	.66	1.35
Hail insurance	--	--	.22	--	--	.39	--	--
Gen'l farm expense	1.35	.85	1.02	.86	.70	.65	.80	.73
Total growing cost	\$6.68	\$7.84	\$6.91	\$6.54	\$6.11	\$6.06	\$6.41	\$7.10
Harvesting cost								
Man labor	\$.52	\$.62	\$.46	\$.54	\$.73	\$.49	\$.68	\$.53
Horse labor	.01	--	--	--	--	--	.01	--
Tractor use	.46	.43	.51	.35	.41	.50	.38	.51
Truck use	.10	.22	--	.25	.13	.12	.06	.12
Combine	.75	1.31	1.11	.74	1.22	.86	1.87	1.32
Total harvesting cost	\$1.84	\$2.58	\$2.08	\$1.83	\$2.49	\$1.97	\$3.00	\$2.48
Cost of growing and harvesting								
Taxes	\$8.52	\$10.42	\$8.99	\$8.42	\$8.60	\$8.03	\$9.41	\$9.58
Interest on land	1.40	2.03	1.65	1.40	1.76	.85	2.04	1.44
TOTAL COST	7.50	7.50	6.50	7.50	5.88	7.50	6.11	6.75
INCOME PER ACRE	\$17.42	\$19.95	\$17.14	\$17.32	\$16.24	\$16.38	\$17.56	\$17.77
Grain	\$48.42	\$54.99	\$46.37	\$47.09	\$41.16	\$41.49	\$42.80	\$43.52
Pasture	--	--	.11	--	--	--	.16	--
TOTAL INCOME	\$48.42	\$54.99	\$46.48	\$47.09	\$41.16	\$41.49	\$42.96	\$43.52
NET PROFIT PER ACRE	\$31.00	\$35.04	\$29.34	\$29.77	\$24.92	\$25.11	\$25.40	\$25.75
NET COST PER BUSHEL	\$.540	\$.544	\$.551	\$.552	\$.592	\$.592	\$.610	\$.613

Table 6.--Cost of production (acre basis) on 28 farms (2,168.17 acres; 61,913 bushels)
Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number							
	94	72	27	75	79	95	66	47
Acres in soybeans	58.55	123.08	69.86	79.70	18.33	138.47	49.71	68.97
Yield per acre (bu.)	23.69	26.84	27.96	25.90	24.77	22.84	24.20	20.46
Labor per acre								
Man hours	2.97	4.99	3.40	6.44	3.36	3.13	6.25	1.96
Horse hours	.35	--	--	1.68	--	--	.48	--
Tractor hours	2.15	3.94	2.54	4.45	2.48	2.27	4.47	1.96
Truck miles	.77	.93	2.29	.99	.33	1.08	.97	1.01
COST ITEMS PER ACRE								
Growing cost								
Man labor	\$.48	\$.97	\$.83	\$1.01	\$.53	\$.52	\$1.43	\$.43
Horse labor	.19	--	--	--	--	--	--	--
Tractor use	.58	1.70	1.13	1.12	.85	1.16	1.69	.83
Truck use	--	.06	--	--	--	.01	--	--
Machinery	.34	.44	.59	.96	.38	.52	.96	.48
Seed	2.71	2.19	2.63	1.95	2.07	2.23	1.60	2.39
Fertilizer	.47	.59	.34	1.51	2.80	.39	.43	.07
Hail insurance	--	--	--	--	--	.35	.31	.52
Gen'l farm expense	.58	.84	.91	.91	.26	.66	1.07	.31
Total growing cost	\$5.35	\$6.79	\$6.43	\$7.46	\$6.89	\$5.84	\$7.49	\$5.03
Harvesting cost								
Man labor	\$.45	\$.40	\$.36	\$.87	\$.49	\$.59	\$.54	\$.18
Horse labor	--	--	--	.15	--	--	.15	--
Tractor use	.49	.41	.45	.44	.46	.41	.68	.35
Truck use	.03	.02	.17	.06	.02	.13	.06	.13
Combine	.90	1.68	1.87	1.46	1.94	1.76	.92	1.28
Total harvesting cost	\$1.87	\$2.51	\$2.85	\$2.98	\$2.91	\$2.89	\$2.35	\$1.94
Cost of growing and harvesting								
Taxes	\$7.22	\$9.30	\$9.28	\$10.44	\$9.80	\$8.73	\$9.84	\$6.97
Interest on land	1.85	1.65	1.69	1.21	1.51	1.50	1.38	1.67
TOTAL COST	6.09	6.46	7.49	5.50	5.44	5.65	5.75	6.25
INCOME PER ACRE	\$15.16	\$17.41	\$18.46	\$17.15	\$16.75	\$15.88	\$16.97	\$14.89
Grain	\$35.53	\$40.27	\$41.89	\$38.84	\$37.15	\$34.26	\$36.30	\$30.69
Pasture	--	.03	--	--	.01	.01	--	.02
TOTAL INCOME	\$35.53	\$40.30	\$41.89	\$38.84	\$37.16	\$34.27	\$36.30	\$30.71
NET PROFIT PER ACRE	\$20.37	\$22.89	\$23.43	\$21.69	\$20.41	\$18.39	\$19.33	\$15.82
NET COST PER BUSHEL	\$.640	\$.647	\$.661	\$.662	\$.676	\$.695	\$.701	\$.727

Table 6.--Cost of Production (acre basis) on 28 farms (2,168.17 acres; 61,913 bushels)
Champaign-Platt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number				1941 average of 28 farms	1940 average of 31 farms	1939 average of 28 farms
	71	73	49	62			
Acres in soybeans	51.12	13.56	73.34	98.91	77.34	73.16	65.38
Yield per acre (bu.)	23.12	25.66	22.73	21.08	28.56	21.52	31.83
Labor per acre							
Man hours	3.89	4.37	3.74	4.95	4.30	4.37	4.26
Horse hours	1.34	--	.71	.18	.21	.98	.60
Tractor hours	2.28	3.89	2.90	3.77	2.96	2.67	2.51
Truck miles	1.25	.74	.72	1.39	1.90	.63	1.62
COST ITEMS PER ACRE							
Growing cost							
Man labor	\$.69	\$.99	\$.87	\$.84	\$.85	\$.84	\$.65
Horse labor	.30	--	.09	.01	.03	.15	.07
Tractor use	1.59	1.54	1.48	1.22	1.22	1.16	1.08
Truck use	--	--	--	--	.01	.01	.01
Machinery	.67	1.10	.74	.60	.67	.58	.44
Seed	1.83	2.71	3.09	1.44	2.12	1.82	1.52
Fertilizer	1.40	1.52	.76	.96	.78	.61	.46
Hail insurance	--	--	--	.55	.13	.08	.05
Gen'l farm expense	.52	.59	1.38	.91	.81	.94	.72
Total growing cost	\$7.07	\$8.45	\$8.41	\$6.53	\$6.62	\$6.19	\$5.00
Harvesting cost:							
Man labor	\$.63	\$.49	\$.42	\$.43	\$.52	\$.40	\$.44
Horse labor	--	--	.05	--	.01	.07	.03
Tractor use	.52	.57	.27	.64	.46	.30	.36
Truck use	.14	.09	.10	.10	.10	.03	.14
Combine	1.39	1.47	.71	1.28	1.18	1.22	1.45
Total harvesting cost	\$2.68	\$2.62	\$1.55	\$2.45	\$2.27	\$2.02	\$2.42
Cost of growing and harvesting							
Taxes	\$9.76	\$11.08	\$9.95	\$8.99	\$8.89	\$8.21	\$7.42
Interest on land	1.50	1.54	1.40	2.03	1.53	1.41	1.34
TOTAL COST	6.25	6.75	6.25	6.25	6.61	6.61	6.60
INCOME PER ACRE	\$17.51	\$19.37	\$17.60	\$17.27	\$17.03	\$16.23	\$15.36
Grain	\$34.68	\$38.50	\$34.09	\$31.62	\$42.83	\$15.11	\$22.92
Pasture	.11	--	--	.01	.04	.34	.19
TOTAL INCOME	\$34.79	\$38.50	\$34.09	\$31.63	\$42.87	\$15.45	\$23.11
NET PROFIT PER ACRE	\$17.28	\$19.13	\$16.49	\$14.36	\$25.84	\$ - .78	\$ 7.75

Table 7.--Cost of production (acre basis) on 15 farms (369.56 acres; 8,929 bushels)
Champaign-Platt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number							
	56	74	84	92	45	47	64	71
Acres in winter wheat	18.17	33.82	9.70	35.26	45.44	20.24	48.90	19.54
Yield per acre (bu.)	31.64	31.73	24.64	28.08	29.22	23.27	19.39	20.47
Labor per acre								
Man hours	4.46	4.40	1.70	4.21	1.90	2.00	2.01	5.02
Horse hours	--	--	--	1.02	--	--	--	5.53
Tractor hours	3.14	2.19	1.06	2.74	.86	2.00	2.60	2.30
Truck miles	--	2.37	--	--	4.00	--	--	1.07
COST ITEMS PER ACRE								
Growing cost								
Man labor	\$.64	\$.80	\$.23	\$.56	\$.13	\$.40	\$.71	\$.71
Horse labor	--	--	--	--	--	--	--	.54
Tractor use	1.49	.98	.27	1.01	.30	1.04	.85	1.20
Truck use	--	--	--	--	--	--	--	--
Machinery	.60	.38	.52	.65	.29	.47	.25	.51
Seed	1.26	1.96	1.32	1.11	2.01	1.66	1.37	1.31
Fertilizer	1.35	.89	.67	.32	2.40	.07	.36	.70
Hail insurance	--	--	--	--	.46	.37	--	--
Gen'l farm expense	.82	.76	.38	.89	.41	.28	.49	.74
Total growing cost	\$6.16	\$5.77	\$3.39	\$4.54	\$6.00	\$4.29	\$4.03	\$5.71
Harvesting cost								
Man labor	.59	.63	.29	.68	.47	.17	.56	.62
Horse labor	--	--	--	.20	--	--	--	.23
Tractor use	.31	.35	.25	.44	.26	.33	.25	.15
Truck use	--	.16	--	--	.20	--	--	.07
Combine	1.23	.65	1.01	.84	.74	1.29	.92	.86
Total harvesting cost	\$2.13	\$1.79	\$1.55	\$2.16	\$1.67	\$1.79	\$1.73	\$1.93
Cost of growing and harvesting								
Taxes	\$8.29	\$7.56	\$4.94	\$6.70	\$7.67	\$6.08	\$5.76	\$7.64
Interest on land	1.44	1.60	1.65	.85	1.40	1.66	1.35	1.50
TOTAL COST	6.75	6.50	6.50	7.50	7.50	6.25	7.00	6.25
INCOME PER ACRE	\$16.18	\$15.66	\$13.09	\$15.05	\$16.57	\$13.99	\$14.11	\$15.39
Grain	\$28.48	\$28.55	\$22.17	\$25.27	\$26.29	\$21.39	\$17.45	\$18.42
Straw	1.07	--	--	--	.76	--	.06	--
Pasture	.98	--	--	--	--	.05	1.54	1.77
TOTAL INCOME	\$30.53	\$28.55	\$22.17	\$25.27	\$27.05	\$21.44	\$19.05	\$20.19
NET PROFIT PER ACRE	\$14.05	\$12.89	\$9.08	\$10.22	\$10.48	\$7.45	\$4.94	\$4.80
NET COST PER BUSHEL	\$.456	\$.494	\$.531	\$.536	\$.541	\$.599	\$.645	\$.666

27.40
20.58
2.85
--
2.26
.99
\$.67
--
1.11
--
.57
1.32
1.67
--
\$.76
\$6.10
.34
--
.23
.04
.65
\$1.26
\$7.36
1.42
7.50
\$16.28
\$18.53
.82
1.60
\$20.95
\$4.67
\$.673

WINTER WHEAT (COMBINED) (cont'd)
Table 7.--Cost of production (acre basis) on 13 farms (369.56 acres; 8,929 bushels)
Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per bushel)

Items	Farm number				49 ^a /	1941		1940		1939	
	72	60	75	62		average of 13 farms	average of 13 farms	average of 15 farms	average of 16 farms	average of 16 farms	
Acres in winter wheat	25.53	21.46	42.71	21.39	25.27	28.43	28.03	28.03	23.39		
Yield per acre (bu.)	25.62	27.61	16.01	19.21	7.66	24.16	26.56	26.56	26.24		
Labor per acre											
Man hours	5.76	5.17	4.24	1.74	2.44	3.75	3.69	3.69	3.44		
Horse hours	--	--	1.22	--	1.15	.53	.42	.42	.86		
Tractor hours	3.15	3.36	2.76	1.41	1.56	2.30	2.39	2.39	2.32		
Truck miles	15.55	7.92	.37	--	--	2.42	1.24	1.24	.73		
COST ITEMS PER ACRE											
Growing cost											
Man labor	\$1.15	\$.68	\$.65	\$.21	\$.28	\$.59	\$.45	\$.45	\$.47		
Horse labor	--	--	--	--	.23	.03	.06	.06	.06		
Tractor use	.89	1.54	.77	.28	.59	.88	.94	.94	.80		
Truck use	.84	.01	--	--	--	.06	--	--	--		
Machinery	.52	.54	.58	.24	.36	.45	.39	.39	.37		
Seed	1.73	1.37	1.55	2.05	1.68	1.56	1.30	1.30	1.13		
Fertilizer	.59	1.18	1.16	.96	.75	1.00	1.14	1.14	.70		
Hail insurance	--	--	--	1.26	--	.15	.20	.20	.11		
Gen'l farm expense	.90	1.01	.57	.32	.88	.64	.72	.72	.55		
Total growing cost	\$6.62	\$6.33	\$5.28	\$5.32	\$4.77	\$5.36	\$5.20	\$5.20	\$4.19		
Harvesting cost											
Man labor	\$.56	\$.86	\$.53	\$.22	\$.48	\$.52	\$.50	\$.50	\$.36		
Horse labor	--	--	.11	--	.11	.04	--	--	.05		
Tractor use	.57	.50	.21	.30	.28	.32	.41	.41	.36		
Truck use	.05	.56	.03	--	--	.08	.08	.08	.10		
Combine	1.70	1.32	1.42	1.30	.71	1.04	.94	.94	.99		
Total harvesting cost	\$2.88	\$3.24	\$2.30	\$1.82	\$1.58	\$2.00	\$1.93	\$1.93	\$1.86		
Cost of growing and harvesting	\$9.50	\$9.57	\$7.58	\$7.14	\$6.35	\$7.36	\$7.13	\$7.13	\$6.05		
Taxes	1.65	2.03	1.22	2.03	1.39	1.46	1.33	1.33	1.36		
Interest on land	6.33	7.50	5.50	6.25	6.25	5.76	6.80	6.80	6.70		
TOTAL COST	\$17.48	\$19.10	\$14.30	\$15.42	\$13.99	\$15.58	\$15.26	\$15.26	\$14.11		
INCOME PER ACRE											
Grain	\$23.05	\$24.85	\$14.41	\$17.29	\$ 6.89	\$21.77	\$17.53	\$17.53	\$15.75		
Straw	--	--	.52	--	--	.28	.11	.11	.03		
Pasture	--	--	1.74	--	--	.67	.28	.28	.37		
TOTAL INCOME	\$23.05	\$24.85	\$16.67	\$17.29	\$ 6.89	\$22.72	\$17.92	\$17.92	\$16.15		
NET PROFIT PER ACRE	\$ 5.57	\$ 5.75	\$ 2.37	\$ 1.87	\$-7.10	\$ 7.14	\$ 2.66	\$ 2.66	\$ 2.04		
NET COST PER BUSHEL	\$.682	\$.692	\$.752	\$.803	\$ 1.828	\$.606	\$.560	\$.560	\$.522		

TABLE 7.--COST OF PRODUCTION (acre basis) on 13 farms (369.56 acres; 8,929 bushels) Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per bushel)

Table 8.--Cost of production (acre basis) on 18 farms (166.53 acres; 511.25 tons)
Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per ton)

Items	Farm number										
	56	62	15	93	73	80	72	47	63	60	75
Acres in alfalfa	29.29	3.30	10.53	6.08	14.31	14.04	2.29	2.59	3.30	5.00	9.65
Yield per acre (ton)	2.80	3.82	3.85	4.44	3.56	3.60	4.37	3.09	3.48	3.85	2.30
Labor per acre											
Man hours	9.35	18.16	12.58	18.13	15.43	20.37	25.54	11.78	18.79	11.55	13.16
Horse hours	3.82	11.32	5.41	14.23	11.79	--	23.14	22.78	15.98	2.00	6.63
Tractor hours	2.53	7.50	2.28	2.63	5.03	7.83	--	--	2.65	4.85	2.02
Truck miles	--	--	1.04	.49	--	.71	--	--	--	--	3.32
COST ITEMS PER ACRE											
Man labor	\$2.94	\$4.65	\$5.32	\$6.41	\$5.02	\$6.86	\$7.05	\$3.73	\$5.60	\$4.49	\$4.56
Horse labor	.64	1.07	.72	3.62	2.35	--	3.10	8.54	7.18	1.88	.57
Tractor use	1.37	3.53	1.68	1.40	2.72	4.26	--	--	1.14	3.13	1.19
Truck use	--	--	.04	.02	--	.04	--	--	--	--	.22
Machinery	1.27	2.98	1.60	1.39	1.59	2.05	2.37	1.35	2.28	1.64	.62
Pick-up baler	.40	--	5.82	2.30	1.77	2.74	--	--	--	6.48	3.11
Combine	--	--	--	--	.31	--	--	--	--	--	--
Seed	.59	--	.64	2.61	1.38	.70	10.18	1.35	1.24	1.47	--
Fertilizer	.68	.48	.60	.84	.76	.66	.29	.03	.32	.59	.76
Gen'l farm expense	1.66	3.36	2.74	3.92	2.13	2.60	4.24	1.85	3.64	1.79	1.85
TOTAL OPERATING COST	\$ 9.55	\$16.07	\$19.16	\$22.51	\$18.03	\$19.91	\$27.23	\$16.85	\$21.40	\$21.47	\$12.88
Taxes	1.44	2.03	1.86	1.42	1.54	1.45	1.65	1.66	1.30	2.03	1.22
Interest on land	6.75	6.25	5.00	7.50	6.75	6.50	6.00	6.25	6.75	7.50	5.50
TOTAL COST	\$17.74	\$24.35	\$27.02	\$31.43	\$26.32	\$27.87	\$34.88	\$24.76	\$29.45	\$31.00	\$19.60
INCOME PER ACRE											
Hay	\$26.54	\$35.29	\$45.19	\$46.83	\$33.92	\$39.32	\$40.39	\$28.57	\$32.24	\$45.23	\$27.14
Pasture	2.11	--	--	--	--	.03	--	--	1.50	--	--
Seed	--	--	--	--	--	--	--	--	--	--	--
TOTAL INCOME	\$28.65	\$35.29	\$45.19	\$46.83	\$33.92	\$39.35	\$40.39	\$28.57	\$33.74	\$45.23	\$27.14
NET PROFIT PER ACRE	\$10.91	\$10.94	\$18.17	\$15.40	\$ 7.60	\$11.48	\$ 5.51	\$ 3.81	\$ 4.29	\$14.23	\$ 7.54
NET COST PER TON	\$ 5.58	\$ 6.38	\$ 7.03	\$ 7.08	\$ 7.39	\$ 7.74	\$ 7.99	\$ 8.02	\$ 8.02	\$ 8.05	\$ 8.50

ALFALFA HAY (cont'd)

Table 8.--Cost of production (acre basis) on 18 farms (166.53 acres; 511.25 tons)
Champaign-Platt Counties--1941 (Farms ranked in order of net cost per ton)

Items	Farm number							1941	1940	1939
	94	49	79	67	74	89	91	ave. of 18 farms	ave. of 21 farms	ave. of 18 farms
Acres in alfalfa	4.44	17.04	7.31	1.55	11.91	5.54	17.86	9.25	9.22	6.48
Yield per acre (ton)	3.15	2.07	2.46	1.94	3.80	2.89	2.42	3.07	2.35	2.82
Labor per acre										
Man hours	15.99	5.36	12.93	4.52	23.68	16.42	14.22	13.92	13.94	15.04
Horse hours	--	1.19	--	--	5.12	10.11	--	5.06	7.60	13.55
Tractor hours	6.53	2.32	6.29	3.87	4.62	2.26	6.58	4.04	2.49	1.16
Truck miles	.11	--	--	1.29	3.53	--	1.74	.79	.49	1.13
COST ITEMS PER ACRE										
Man labor	5.02	2.26	4.38	1.45	3.29	5.59	6.07	4.87	4.12	3.79
Horse labor	--	.25	--	--	1.38	3.85	--	1.18	1.68	2.19
Tractor use	3.15	1.40	3.40	1.86	2.99	1.29	2.99	2.23	1.32	.65
Truck use	.01	--	--	.06	.24	--	.19	.05	--	--
Machinery	3.90	.43	1.78	4.21	1.90	2.98	2.09	1.66	1.14	1.74
Pick-up baler	.52	2.59	2.10	--	4.49	2.00	2.17	2.30	1.22	1.34
Combine	--	--	--	--	--	--	--	--	--	.06
Seed	3.14	.97	--	--	3.00	.48	--	1.06	.75	.45
Fertilizer	.23	.38	1.40	.23	2.48	.24	.33	.72	.46	.66
Gen'l farm expense	3.08	2.00	1.00	1.13	3.45	5.01	2.51	2.43	2.72	2.21
TOTAL OPERATING COST	\$19.05	\$10.28	\$14.06	\$8.94	\$28.22	\$21.44	\$16.35	\$16.50	\$13.41	\$13.09
Taxes	1.85	1.39	1.52	1.91	1.60	1.40	1.76	1.56	1.63	1.57
Interest on land	6.14	6.25	6.50	6.50	6.50	7.50	6.75	6.56	6.74	6.66
TOTAL COST	\$27.04	\$17.92	\$22.08	\$17.35	\$36.32	\$30.34	\$24.86	\$24.62	\$21.78	\$21.32
INCOME PER ACRE										
Hay	\$31.17	\$23.34	\$20.47	\$17.90	\$42.79	\$30.35	\$26.06	\$31.99	\$22.03	\$21.30
Pasture	--	--	4.18	--	--	2.04	--	.66	.64	1.08
Seed	--	--	--	--	--	--	--	--	--	.63
TOTAL INCOME	\$31.17	\$23.34	\$24.65	\$17.90	\$42.79	\$32.39	\$26.06	\$32.65	\$22.67	\$23.01
NET PROFIT PER ACRE	\$ 4.13	\$ 5.42	\$ 2.57	\$.55	\$ 6.47	\$ 2.05	\$ 1.20	\$ 8.03	\$.89	\$ 1.69
NET COST PER TON	\$ 8.58	\$ 8.66	\$ 8.97	\$ 8.97	\$ 9.56	\$ 9.80	\$10.27	\$ 7.80	\$ 9.00	\$ 6.96

CLOVER HAY

Table 9.--Cost of production (acre basis) on 9 farms (203.03 acres; 239 tons) Champaign-Platt Counties--1941 (Farms ranked in order of net cost per ton)

Items	Farm number						
	83a/	64	89	93	84	56	92
Acres in clover hay	5.64	26.64	19.49	23.32	16.54	8.20	32.81
Yield per acre (ton)	1.42	1.54	1.46	1.42	1.21	.85	1.02
Labor per acre							
Man hours	7.45	4.08	4.71	8.89	8.25	5.49	6.57
Horse hours	3.90	.18	.91	9.99	6.85	1.95	1.65
Tractor hours	1.24	2.06	1.56	.64	.91	3.05	2.04
Truck miles	.53	--	2.00	.26	--	--	--
COST ITEMS PER ACRE							
Man labor	\$ 2.30	\$ 1.21	\$ 1.58	\$ 3.07	\$ 2.56	\$ 2.29	\$ 1.88
Horse labor	.59	.04	.33	2.51	.80	.33	.34
Tractor use	.58	1.03	.86	.33	.50	2.63	.97
Truck use	.04	--	.11	.01	--	--	--
Machinery	1.27	1.07	.83	.60	1.39	.23	.86
Pickup baler	--	1.28	1.31	1.03	--	--	.74
Combine	.38	--	1.19	.53	--	3.26	--
Seed	.48	.67	.52	.85	1.05	.82	1.14
Fertilizer	.22	.18	.24	.84	.33	.67	.16
Gen'l farm expense	1.02	.37	1.42	1.76	1.88	.97	1.06
TOTAL OPERATING COST	\$ 6.88	\$ 5.85	\$ 8.39	\$11.53	\$ 8.51	\$11.20	\$ 7.15
Taxes	1.02	1.35	1.40	1.42	1.65	1.44	.85
Interest on land	6.00	6.50	7.50	7.50	6.50	6.75	7.50
TOTAL COST	\$13.90	\$13.70	\$17.29	\$20.45	\$16.66	\$19.39	\$15.50
INCOME PER ACRE							
Hay	\$10.64	\$13.59	\$13.62	\$13.19	\$ 9.07	\$ 6.40	\$ 9.87
Pasture	2.48	--	.20	1.17	1.91	--	1.56
Seed	7.09	--	--	2.68	--	8.78	--
TOTAL INCOME	\$20.21	\$13.59	\$13.82	\$17.04	\$10.98	\$15.18	\$11.43
NET PROFIT PER ACRE	\$ 6.31	\$ -.11	\$ -3.47	\$ -3.41	\$ -5.68	\$ -4.21	\$ -4.07
NET COST PER TON	\$ 3.05	\$ 8.91	\$11.69	\$11.73	\$12.20	\$12.43	\$13.73

a/	Not included	in the average.

CLOVER HAY (Cont'd)

Table 9.--Cost of production (acre basis) on 9 farms (203.03 acres; 239 tons)
Champaign-Piatt Counties--1941 (Farms ranked in order of net cost per ton)

Items	Farm number		1941 average of 9 farms	1940 average of 15 farms	1939 average of 8 farms
	95	45			
Acres in clover hay	23.32	40.67	12.04	19.56	21.48
Yield per acre (ton)	1.03	1.06	.77	1.30	.97
Labor per acre					
Man hours	6.14	7.50	5.81	8.38	6.87
Horse hours	.40	--	3.65	3.63	4.66
Tractor hours	1.55	2.66	.83	2.05	1.29
Truck miles	2.70	4.27	1.66	.48	.55
COST ITEMS PER ACRE					
Man labor	\$ 2.05	\$ 2.73	\$ 2.16	\$ 2.55	\$ 1.91
Horse labor	.08	--	.34	.64	.61
Tractor use	1.04	1.77	1.06	1.24	.84
Truck use	.37	.21	.11	.03	--
Machinery	.88	1.04	.88	.70	.73
Pickup baler	1.47	2.10	1.18	1.05	.97
Combine	--	--	.31	.76	1.14
Seed	.34	.57	.75	.97	.67
Fertilizer	.19	.26	.34	.32	.26
Gen'l farm expense	1.29	1.39	1.23	1.82	.91
TOTAL OPERATING COST	\$ 7.71	\$ 10.07	\$ 8.50	\$ 10.08	\$ 8.04
Taxes	1.50	1.40	1.33	1.43	1.36
Interest on land	5.25	7.50	6.88	6.48	6.77
TOTAL COST	\$ 14.46	\$ 18.97	\$ 16.71	\$ 17.99	\$ 16.17
INCOME PER ACRE					
Hay	\$ 10.29	\$ 10.87	\$ 11.01	\$ 11.13	\$ 7.46
Pasture	--	--	.70	.73	.08
Seed	--	3.93	1.45	2.02	3.89
TOTAL INCOME	\$ 10.29	\$ 14.80	\$ 13.16	\$ 13.88	\$ 11.45
NET PROFIT PER ACRE	\$ -4.17	\$ -4.17	\$ -3.55	\$ -4.11	\$ -4.74
NET COST PER TON	\$ 14.05	\$ 14.22	\$ 12.37	\$ 11.73	\$ 12.63

Table 10.--Cost of production (acre basis) on 8 farms (26.3 acres; 48.5 tons)
Champaign-Platt Counties--1941 (Farms ranked in order of net cost per ton)

Items	Farm number								1941 ave. of 8 farms	1940 ave. of 23 farms	1939 ave. of 20 farms
	94	93	67	27	56	71	79	72			
Acres in soybean hay	1.68	4.44	2.94	1.76	3.09	7.02	1.07	4.30	3.66	7.10	4.98
Yield per acre (tons)	2.68	2.70	1.70	2.84	1.94	1.28	1.40	1.28	1.84	1.56	2.17
Labor per acre											
Man hours	1.93	19.26	11.73	26.85	18.69	14.39	6.54	22.33	16.45	11.32	18.39
Horse hours	--	15.71	--	18.18	15.61	11.04	--	13.02	10.78	6.21	10.50
Tractor hours	1.79	1.91	7.31	1.85	3.07	1.50	5.61	4.94	3.17	2.86	2.83
Truck miles	1.19	.06	3.06	--	--	--	--	4.19	1.11	.26	1.69
COST ITEMS PER ACRE											
Growing cost											
Man labor	\$.45	\$.88	\$.59	\$.77	\$.67	\$.70	\$.59	\$ 1.54	\$.83	\$.81	\$.71
Horse labor	--	.10	--	--	.02	.31	--	--	.10	.25	.09
Tractor use	.58	1.05	.88	1.00	1.01	1.51	.92	2.67	1.38	.99	1.16
Truck use	--	--	--	--	--	--	--	.24	.04	--	--
Machinery	.20	.89	.32	.54	.25	.67	.17	.54	.54	.50	.47
Seed	2.77	1.87	1.47	2.64	2.25	1.83	2.19	2.19	2.03	1.61	1.56
Fertilizer	.47	1.68	.46	.34	1.35	1.40	13.30	.59	1.56	.83	.81
Gen'l farm expense	.37	4.21	2.91	7.24	3.32	2.17	.83	3.69	3.15	1.87	3.13
Total growing cost	\$ 4.84	\$ 10.68	\$ 6.63	\$ 12.53	\$ 8.87	\$ 8.59	\$ 18.00	\$ 11.46	\$ 9.63	\$ 6.86	\$ 7.93
Harvesting cost											
Man labor	\$.19	\$ 6.10	\$ 3.15	\$ 7.74	\$ 5.08	\$ 3.46	\$ 1.47	\$ 4.69	\$ 4.26	\$ 2.36	\$ 3.77
Horse labor	--	3.84	--	6.70	2.62	2.19	--	1.74	2.27	.98	1.45
Tractor use	.31	--	2.63	--	.67	--	2.04	--	.48	.49	.31
Truck use	.05	--	.13	--	--	--	--	.28	.06	.01	--
Machinery	.95	.33	.12	.32	.18	1.33	.38	.72	.68	.72	.90
Total harvesting cost	\$ 1.50	\$ 10.27	\$ 6.10	\$ 14.76	\$ 8.55	\$ 6.98	\$ 3.89	\$ 7.50	\$ 7.75	\$ 4.63	\$ 6.43
Cost of growing and harvesting											
Taxes	\$ 6.34	\$ 20.95	\$ 12.73	\$ 27.29	\$ 17.42	\$ 15.56	\$ 21.89	\$ 18.96	\$ 17.38	\$ 11.49	\$ 14.36
Interest on land	1.85	1.42	1.91	1.69	1.44	1.50	1.46	1.65	1.58	1.46	1.40
Interest on land	5.75	7.50	6.50	7.50	6.75	6.25	6.50	6.82	6.71	6.36	6.42
TOTAL COST	\$ 13.94	\$ 29.87	\$ 21.14	\$ 36.48	\$ 25.61	\$ 23.31	\$ 29.85	\$ 27.43	\$ 25.67	\$ 19.31	\$ 22.18
INCOME PER ACRE											
Hay	\$ 20.09	\$ 20.27	\$ 12.76	\$ 21.30	\$ 14.57	\$ 10.28	\$ 10.51	\$ 9.59	\$ 14.01	\$ 11.64	\$ 11.13
NET PROFIT PER ACRE	\$ 6.15	\$ -9.60	\$ -8.38	\$ -15.18	\$ -11.04	\$ -13.03	\$ -19.34	\$ -17.84	\$ -11.66	\$ -7.67	\$ -11.05
NET COST PER TON	\$ 5.20	\$ 11.05	\$ 12.43	\$ 12.84	\$ 13.19	\$ 17.67	\$ 21.29	\$ 21.45	\$ 13.92	\$ 12.36	\$ 10.21

a/ Contains \$.67 for pasture.

MISCELLANEOUS CROPS
Table 11.--Cost of production (acre basis), Champaign-Platt Counties--1941

Items	Clover and timothy hay ^a				Sweet corn				Barley		Flax	
	15	45	90	Farm number	66	49	49	49	1.59	25.16	17.11	10.11
Acres in crop	9.00	9.79	35.71	18.23	20.50	1.73	1.73	1.73	1.59	25.16	17.11	10.11
Yield per acre (bu. or ton)	2.39	1.63	1.08	4.44	2.48	1.73	1.73	1.73	1.59	25.16	17.11	10.11
Labor per acre	6.11	3.34	10.36	12.40	16.93	1.73	1.73	1.73	1.59	25.16	17.11	10.11
Man hours	5.11	--	9.79	8.45	14.73	.63	.63	.63	1.59	25.16	17.11	10.11
Horse hours	.44	1.25	1.18	3.46	4.65	1.26	1.26	1.26	1.59	25.16	17.11	10.11
Tractor hours	1.11	.02	--	15.91	23.58	--	--	--	1.59	25.16	17.11	10.11
Truck miles												
COST ITEMS PER ACRE												
Growing cost												
Man labor	\$ --	\$ --	\$ --	\$ 1.48	\$ 1.34	\$.21	\$.21	\$.21	\$.21	\$.21	\$.21	\$.21
Horse labor	--	--	--	.36	--	--	--	--	--	--	--	--
Tractor use	--	--	--	1.93	2.06	.39	.39	.39	.39	.39	.39	.39
Machinery	--	--	--	1.51	.96	.43	.43	.43	.43	.43	.43	.43
Seed	.94	.98	.43	.43	.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
Fertilizer	.60	.26	.33	.77	2.02	.76	.76	.76	.76	.76	.76	.76
Gen'l farm expense	1.33	.60	1.51	1.73	2.92	.66	.66	.66	.66	.66	.66	.66
Total growing cost	\$ 2.87	\$ 1.84	\$ 2.27	\$ 8.21	\$ 9.91	\$ 4.06	\$ 4.06	\$ 4.06	\$ 4.06	\$ 4.06	\$ 4.06	\$ 4.06
Harvesting cost												
Man labor	\$ 2.50	\$ 1.64	\$ 3.37	\$ 2.45	\$ 3.49	\$.38	\$.38	\$.38	\$.38	\$.38	\$.38	\$.38
Horse labor	.68	--	.77	.91	2.69	.11	.11	.11	.11	.11	.11	.11
Tractor use	.42	.97	.73	--	.43	.31	.31	.31	.31	.31	.31	.31
Truck use	.05	--	--	1.19	2.36	--	--	--	--	--	--	--
Machinery	.72	1.03	.75	--	.15	--	--	--	--	--	--	--
Combine or baler	2.57	3.12	1.79	--	--	.72	.72	.72	.72	.72	.72	.72
Total harvesting cost	\$ 6.94	\$ 6.76	\$ 7.41	\$ 4.55	\$ 9.12	\$ 1.52	\$ 1.52	\$ 1.52	\$ 1.52	\$ 1.52	\$ 1.52	\$ 1.52
Cost of growing and harvesting	\$ 9.81	\$ 8.60	\$ 9.68	\$ 12.76	\$ 19.03	\$ 5.58	\$ 5.58	\$ 5.58	\$ 5.58	\$ 5.58	\$ 5.58	\$ 5.58
Taxes	1.86	1.40	2.04	1.02	1.38	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Interest on land	7.00	7.50	6.07	5.13	5.75	6.25	6.25	6.25	6.25	6.25	6.25	6.25
TOTAL COST	\$ 18.67	\$ 17.50	\$ 17.79	\$ 18.91	\$ 26.16	\$ 13.23	\$ 13.23	\$ 13.23	\$ 13.23	\$ 13.23	\$ 13.23	\$ 13.23
INCOME PER ACRE												
Grain or seed	\$ --	\$ --	\$.90	\$ 19.54	\$ 23.52	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08
Hay	20.47	15.99	9.74	--	--	--	--	--	--	--	--	--
Straw	--	--	--	--	--	--	--	--	--	--	--	--
Pasture	2.08	--	.18	--	--	--	--	--	--	--	--	--
TOTAL INCOME	\$ 22.55	\$ 15.99	\$ 10.81	\$ 19.54	\$ 23.52	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08	\$ 12.08
NET PROFIT PER ACRE	\$ 3.88	\$ -1.51	\$ -6.98	\$.63	\$ -2.64	\$ -1.15	\$ -1.15	\$ -1.15	\$ -1.15	\$ -1.15	\$ -1.15	\$ -1.15
NET COST PER BUSHEL OR TON	\$ 6.94	\$ 10.71	\$ 15.50	\$ 4.26	\$ 10.57	\$.526	\$.526	\$.526	\$.526	\$.526	\$.526	\$.526

^a/ No attempt was made to divide labor, power, and machinery between growing and harvesting.

LIVESTOCK PRODUCTION COSTS

Hogs

In 1941 hogs were the most profitable livestock enterprise carried on on these farms in Champaign and Piatt Counties. The total value of hogs produced per farm was \$1,649, and after all costs had been met, an average profit of \$483 was left. Hogs consumed 16 percent of the corn produced on the average farm as well as considerable quantities of oats, wheat, and skim milk.

The size of the enterprise varied greatly from farm to farm. Of the 27 farms that had hogs, four produced less than 5,000 pounds of pork; eight, between 5,000 and 10,000 pounds; nine, between 10,000 and 20,000 pounds; and six, more than 20,000 pounds. The average for the group was 15,684 pounds.

The cost of producing 100 pounds of liveweight hog averaged \$7.51 compared with \$6.49 in 1940 and \$5.37 in 1939. The difference was due almost entirely to higher feed costs. Feed constituted 74 percent of the total cost. In spite of their relatively high feeding costs in 1941, hogs made more profit than they had in any year since 1935.

Milk Cattle

On these cash-grain farms in east-central Illinois, dairying is a minor enterprise. On only six of the 28 farms were there more than 10 dairy cows. In some cases the few dairy cows on the farm were kept mainly to supply the family, and surplus sour cream was marketed; in others, where the number of milk cows approached 10, they were kept mainly to bring in income.

Milk production per cow also gives some indication of the emphasis put on dairying. Only seven of the 26 herds of milk cows obtained an average yield of milk per cow above 7,500 pounds; the highest average milk production per cow was 8,710 pounds. There does not appear to be any relationship between the profit from milk cattle and the yield of milk per cow, since some of the highest producing herds of cows made a loss and some low-producing herds made some profit. Neither does there appear to be any relationship between profits from the herds and compliance with the local sanitary requirements and their accompanying premium for milk. An analysis of the records leads to the conclusion that careful feeding and handling of the milk cows had as much to do with profits from the enterprise as did the production per cow.

Feeder Cattle

Five of the farmers fed calves or yearlings, and one fed a drove of heavy cattle during 1940. One bunch of only five calves was fed in the 4-H club calf-feeding contest by the son of one of the farmers. Records for these calves are included in Table 14, for they were fed and handled in very much the same manner as were calves in the larger droves on the other farms.

The figures in Table 14 represent the cost of putting on gains from the time the steers were purchased in 1940 until they were sold in 1941. The weight of the steers when purchased varied from 410 to 968 pounds, and the cost of the feeder steers by the time they reached the farm ranged from \$9.14 to \$11.55 a hundred pounds. The 4-H club calves cost the most per hundred pounds when bought, and they sold for the most at market.

Feed was 81 percent of the fattening costs. For each 100 pounds of gain, the cattle were fed 640 pounds of corn and 311 pounds of hay and were pastured nine days. When the steers were sold, their owners received 66 cents a bushel for all the corn fed to them after the market prices of all the other feeds had been paid and all other expenses met by the steers.

Hogs were placed in the feedlot with all the feeder cattle under study. The gains made by hogs while they were following cattle were credited to the cattle at the average yearly price received for the hogs sold from the farm. The hogs' gain in weight from corn in steer droppings depended largely on the weight of the steers and the kind and amount of corn fed them. The following factors were used in calculating the gains in hogs when they ran behind feeder cattle:

Pork Per Bushel of Corn-Fed Steers (Steers not fed silage)

<u>Kind of corn fed to cattle</u>	<u>Yearling steers</u> (lb. of pork)	<u>Calves</u>
Broken ear	1.5	--
Corn- and cob-meal	.5	.3
Crushed ear	.75	.5
Ground shelled	.5	.3
Shelled	1.2	.75

Beef Herds

Beef herds with over 10 cows were maintained on two of the 28 farms; on six additional farms small numbers of beef cows were carried. Three of the small herds were just being started and contained less than five cows. All of the herds were carried to make use of the roughage available under the soil conservation program on the farms. Beef herds were more profitable in 1941 than they were in 1939 and 1940; and in the case of herds with more than five cows, after the market prices of all the concentrated feeds fed to them and all the cash expenses on them had been subtracted from their sale price, these cattle returned from \$17 to \$24 an animal unit for the roughage and labor that went into them. In Table 15, the

figure called "return to roughage and labor per animal unit" shows how this return varied from farm to farm. All of the herds with over five cows paid well for what might otherwise have been surplus roughage and idle labor.

Poultry

Poultry does not form an important part of the income on the farms in the area of study, as it usually contributes less than five percent of the gross income. Flocks are small, averaging between 100 and 125 laying hens. More income is derived from the sale of poultry for meat than from the sale of eggs, and about one-third of the eggs from the flocks are used in the farm home. When the cash value of eggs and meat used in a cooperating home was included as part of the income from the farm flock, the average annual flock income added up to \$405 in 1941.

These farm flocks in Champaign and Piatt Counties were characterized in the main by low egg yields. Only five of the flocks averaged 140 or more eggs per hen; ten averaged less than 100 eggs. However, the high egg-producing flocks did not always make the greatest profit, for the increase in inventory of the flock and the sale and farm use of poultry meat played an important part in the results secured from the enterprise.

Because of the two sources of income (poultry and eggs), the net cost per dozen eggs was calculated in the following manner: The percentage of total flock income that came from eggs was determined, and this percentage of the total cost items per flock was figured as the cost of eggs. When figured in this way, the cost of producing a dozen eggs was 22.5 cents in 1941 compared with 23 cents in 1940.

Sheep

Sheep were kept on nine farms in 1941; one of the nine (Farm 94) bought feeder lambs to feed out for the market in addition to the lambs produced by a small flock of ewes on the farm. Sheep on the other eight farms were in farm flocks which were used mainly as a means of cleaning up fields and refuse thrown out of the mangers of other livestock.

Because of the small size of the enterprise, frequently the income from such flocks is not sufficient to equal the total costs; in other words, labor and equipment may usually be used more efficiently on a flock of larger size. On the other hand, some farms may not be adapted to handling a larger flock, and such farms may benefit from having a small flock, even though no direct profit is returned.

In computing the cost of carrying these farm flocks, an attempt was made to place a market value on most of the feed that they consumed; this, of course, was difficult to do because so large a portion of the feed consumed was non-marketable.

HOGS

Table 12.--Cost of production of 100 lb. live weight of hogs on 25 farms (423,479 lb.) Champaign-Piatt Counties--1941 (Farms ranked in order of total cost of producing 100 lb.)

Items	Farm number										Totals
	62	73	64	63	84	75	74	80	15	91	
COST ITEMS PER 100 POUNDS											
Feed fed	3.86	3.97	4.13	4.63	4.21	5.10	5.43	5.13	5.63	5.32	
Man labor	.45	.69	.56	.51	.66	.53	.73	.80	.54	.71	
Interest on investment	.39	.11	.18	.20	.26	.19	.11	.09	.14	.32	
Building expense	.25	--	.18	.15	.36	.04	.06	.03	.07	.28	
Equipment expense	--	.05	.18	.07	.05	.09	.07	.39	.21	.04	
Veterinary and medicine	--	.07	--	.15	.21	--	.01	.06	.16	.14	
Gen'l farm expense	.32	.30	.37	.33	.51	.26	.34	.32	.32	.42	
Miscellaneous	.04	.17	.05	.26	.07	.31	.06	.11	.16	.17	
TOTAL COST	\$5.31	\$5.36	\$5.65	\$6.30	\$6.33	\$6.52	\$6.81	\$6.93	\$7.23	\$7.40	
INCOME PER 100 POUNDS											
Receipts and net increases											
PROFIT PER 100 POUNDS											
FEEDS FED PER 100 POUNDS											
Corn equivalent											
Corn	321	295	290	287	272	410	369	356	359	401	
Oats	316	220	258	260	271	406	349	343	280	372	
Wheat	5	88	36	31	2	5	24	15	93	34	
Tankage equivalent	--	--	--	--	--	--	--	--	--	--	
Soybeans	--	10	19	42	26	8	30	27	44	31	
Tankage	--	--	4	--	--	--	--	--	--	--	
Skimmilk	--	1	10	24	--	5	25	1	35	--	
Other proteins	--	--	6	15	266	--	55	--	28	246	
Millfeeds	--	8	9	16	--	5	2	20	11	2	
Minerals	--	6	--	5	4	--	--	12	--	11	
Straw	--	.3	.3	.3	.3	.5	.3	.2	2.7	.3	
Roughage	--	4	6	28	21	16	14	8	6	4	
Pasture days (an. unit)	--	--	--	6	--	--	2	3	1	--	
Pasture days (an. unit)	5	4	3	3	6	5	5	5	3	3	
MAN HOURS PER 100 POUNDS											
Pork produced from feed fed	1.7	2.2	1.8	1.7	2.2	1.8	2.3	2.5	1.5	2.2	
Total pounds hogs produced	14 645	11 770	20 195	21 474	7 314	18 685	49 665	32 092	57 271	12 751	
Sold	9 275	10 130	14 780	16 635	7 030	17 110	44 525	30 702	55 215	10 810	
Used	--	290	820	1 305	750	495	500	500	420	--	

HOGS (cont'd.)
 Table 12.--Cost of production of 100 lb. live weight of hogs on 25 farms (423,479 lb.)
 Champaign-Piatt Counties--1941 (Farms ranked in order of total cost of producing 100 lb.)

Items	Farm number									
	79	92	45	83	56	66	47	89	95	67
COST ITEMS PER 100 POUNDS										
Feed fed	\$4.81	\$5.31	\$5.76	\$5.76	\$5.66	\$5.45	\$5.86	\$5.82	\$5.56	\$5.64
Man labor	1.48	.76	.48	.96	.64	.86	.86	.63	1.38	1.23
Interest on investment	.12	.13	.23	.10	.15	.23	.32	.26	.23	.11
Building expense	.14	.59	.14	.10	.09	--	.21	.06	.19	.25
Equipment expense	.25	.01	.55	.05	.37	.44	.03	.12	.22	.15
Veterinary and medicine	.19	--	--	.10	.16	.03	--	.29	.16	.35
Gen'l farm expense	.38	.38	.30	.43	.37	.46	.43	.63	1.03	.96
Miscellaneous	.10	.37	.13	.10	.28	.26	.05	.20	.15	.25
TOTAL COST	\$7.47	\$7.55	\$7.59	\$7.60	\$7.72	\$7.73	\$7.76	\$8.01	\$8.92	\$8.94
INCOME PER 100 POUNDS										
Receipts and net increases	\$10.72	\$11.73	\$10.45	\$9.99	\$10.84	\$11.11	\$11.82	\$9.93	\$9.94	\$9.57
PROFIT PER 100 POUNDS	3.25	4.18	2.86	2.39	3.12	3.38	4.06	1.92	1.02	.63
FEEDS FED PER 100 POUNDS										
Corn equivalent										
Corn	329	391	370	333	370	361	437	365	376	416
Oats	301	293	335	268	353	341	437	246	305	332
Wheat	21	114	41	75	20	24	--	138	71	98
Tankage equivalent	11	--	--	--	--	--	--	--	10	--
Soybeans	32	10	40	66	45	33	21	36	20	9
Tankage	16	--	--	--	5	--	--	6	3	--
Skimmilk	7	--	21	3	17	--	--	12	1	--
Other proteins	--	87	12	423	48	--	170	95	125	301
Millfeeds	11	--	2	38	25	39	2	12	9	10
Minerals	7	3	22	2	--	6	6	4	4	--
Straw	.4	--	.4	.3	.1	.1	--	.2	.6	3.0
Roughage	11	15	15	38	18	50	--	24	11	6
Pasture days (an. unit)	5	--	--	--	18	10	--	3	--	--
MAN HOURS PER 100 POUNDS	1	3	5	1	4	3	4	5	4	--
Pork produced from feed fed	4.9	2.5	1.6	3.0	2.1	2.7	2.7	2.1	4.9	3.8
Total pounds hogs produced	2 775	6 787	19 415	7 955	22 099	9 995	8 785	16 700	16 387	7 954
Sold	2 440	5 050	17 235	7 135	40 795	6 150	4 930	19 280	11 849	12 920
Used	--	1 700	--	--	520	600	--	480	808	--

HOGS (cont'd.)

Table 12.--Cost of production of 100 lb. live weight of hogs on 25 farms (423,479 lb.)
Champaign-Piatt Counties--1941 (Farms ranked in order of total cost of producing 100 lb.)

Items	Farm number							1941	1940	1939
	91	90	60 ^a	49	93	72	71 ^a	ave. of 25 farms	ave. of 27 farms	ave. of 25 farms
COST ITEMS PER 100 POUNDS										
Feed fed	\$6.61	\$7.22	\$4.18	\$9.33	\$8.23	\$7.54	\$13.97	\$5.54	\$4.83	\$3.84
Man labor	1.36	.88	1.06	.78	1.57	3.67	4.64	.77	.66	.54
Interest on investment	.11	.33	.24	.50	.24	.42	1.12	.19	.13	.15
Building expense	.12	.08	1.33	.34	.33	2.93	1.56	.13	.12	.12
Equipment expense	.02	.05	.91	.22	.21	.01	.17	.17	.18	.36
Veterinary and medicine	.16	.08	--	--	.20	--	--	.10	.09	.08
Gen'l farm expense	.59	.44	.53	.88	.92	2.20	2.42	.44	.46	.12
Miscellaneous	.12	.10	1.03	.07	.59	.64	.10	.17	.02	.02
TOTAL COST	\$9.09	\$9.18	\$9.28	\$12.12	\$12.29	\$17.41	\$23.98	\$7.51	\$6.49	\$5.25
INCOME PER 100 POUNDS										
Receipts and net increases	\$11.47	\$11.42	\$8.31	\$13.75	\$10.96	\$ 5.93	\$11.24	\$10.61	\$5.52	\$5.37
PROFIT PER 100 POUNDS	2.38	2.24	-.97	1.63	-1.33	-11.48	-12.74	3.10	-.97	.14
FEEDS FED PER 100 POUNDS										
Corn equivalent	444	535	187	671	464	493	1 109	375	391	390
Corn	375	464	187	541	432	447	1 031	331	356	365
Oats	81	83	--	142	37	22	91	51	39	26
Wheat	--	--	--	8	--	27	--	1	1	3
Tankage equivalent	38	17	65	18	96	20	23	33	27	20
Soybeans	--	2	--	--	--	--	--	1	2	2
Tankage	35	3	--	--	36	--	--	15	8	3
Skimmilk	36	42	768	142	15	235	275	59	35	65
Other proteins	--	8	--	--	57	--	--	12	18	16
Millfeeds	--	4	--	7	22	--	--	3	--	--
Minerals	1.2	1.2	.6	2.3	1.1	23.9	.5	.8	.8	1
Straw	10	10	93	18	110	--	--	17	17	12
Roughage	--	--	--	--	8	--	--	3	4	4
Pasture days (an. unit)	4	7	--	12	2	12	16	4	4	--
MAN HOURS PER 100 POUNDS	3.3	2.9	3.3	2.3	4.2	13.3	16.0	2.4	2.3	--
Pork produced from feed fed	19 109	15 387	150	5 580	18 250	438	918	16 939	17 963	14 175
Total pounds hogs produced										
Sold	16 765	12 815	225	8 660	30 763	440	3 800	16 538	18 511	14 649
Used	--	130	650	515	525	--	--	418	19 308	13 057

^a/ Not included in the average.

Table 13.--Cost items and income (animal unit basis) for milk cattle on 26 farms
Champaign-Platt Counties--1941 (Farms ranked in order of net profit for each animal unit)

Items	Farm number									
	79	71	62	64	80	83	84	73	72	75
COST ITEMS PER ANIMAL UNIT										
Feed	\$ 55.97	\$ 31.10	\$ 67.14	\$ 50.06	\$ 63.75	\$ 62.35	\$ 62.08	\$ 55.65	\$ 60.50	\$ 83.54
Man labor	24.81	5.42	17.88	21.21	25.68	36.84	20.87	17.19	25.48	22.43
Horse labor	--	.45	--	.01	--	--	--	.34	--	.09
Interest on investment	2.82	3.75	2.75	3.16	3.48	2.92	3.79	5.58	5.62	3.65
Building expense	1.66	.95	1.83	1.93	1.20	1.16	3.33	2.26	3.01	2.17
Equipment expense	.72	.02	.02	.33	.82	.06	.11	.39	.17	.26
Veterinary, medicine and testing	.60	--	--	--	.72	.50	--	.01	1.48	.26
Gen'l farm expense	6.37	2.83	12.92	14.03	10.47	16.25	15.86	7.51	15.31	10.79
Miscellaneous	12.95	1.37	2.96	11.52	12.07	13.14	1.75	11.10	2.35	17.92
TOTAL COST	\$105.90	\$ 45.89	\$105.50	\$102.25	\$118.19	\$133.22	\$107.79	\$100.03	\$113.92	\$141.11
INCOME PER ANIMAL UNIT										
Milk	\$106.91	\$ 61.76	\$ 76.86	\$ 93.39	\$110.75	\$122.32	\$ 93.59	\$ 77.64	\$ 86.78	\$107.46
Increase	24.00	7.00	47.66	21.82	20.47	20.21	19.82	26.16	23.34	30.85
Manure	3.17	1.10	3.88	1.58	1.44	2.16	4.00	3.58	5.06	3.99
TOTAL INCOME	\$134.08	\$ 69.86	\$128.40	\$116.79	\$132.66	\$144.69	\$117.41	\$107.38	\$115.18	\$142.30
NET PROFIT PER ANIMAL UNIT	\$ 28.18	\$ 23.97	\$ 22.90	\$ 14.54	\$ 14.47	\$ 11.47	\$ 9.62	\$ 7.35	\$ 1.26	\$ 1.19
FEED PER ANIMAL UNIT										
Farm grains	1 561	640	1 493	1 220	2 232	1 940	2 210	1 571	1 749	3 504
Millfeeds	129	--	--	19	51	81	16	56	290	230
Hay	3 835	3 000	3 323	2 780	3 635	3 619	4 038	4 035	4 563	3 935
Silage	--	--	--	--	--	--	--	--	--	--
Straw	--	--	--	218	251	666	204	518	232	460
Whole milk	256	--	1 256	456	256	526	42	51	61	282
Skim milk	--	--	--	--	--	--	912	51	--	--
Pasture days	164	274	262	224	176	249	260	236	220	221
LABOR PER ANIMAL UNIT										
Man hours	82.2	18.75	69.90	66.92	82.1	116.2	69.6	54.29	92.27	76.70
Horse hours	--	2.00	--	.06	--	--	--	2.00	--	1.10
MILK PRODUCED PER COW										
Value of milk per cow	\$161.99	\$ 61.76	\$120.95	\$114.10	\$163.41	\$134.40	\$120.14	\$154.54	\$118.37	\$146.67
Number of animal units	34.81	1.00	9.63	15.65	15.95	6.01	6.13	12.54	9.48	19.57
Number of dairy cows	22.98	1.00	6.12	12.81	10.81	5.47	4.78	6.30	6.95	14.34

MILK CATTLE (Cont'd.)
Table 13.--Cost items and income (animal unit basis) for milk cattle on 26 farms
Champaign-Piatt Counties--1941 (Farms ranked in order of net profit for each animal unit)

Items	Farm number									
	89	94	90	47	67	45	15	60	74	66
COST ITEMS PER ANIMAL UNIT										
Feed	\$ 82.55	\$ 40.13	\$ 59.55	\$ 76.64	\$ 41.48	\$ 45.36	\$ 69.42	\$ 79.70	\$ 74.93	\$ 73.94
Man labor	19.52	15.15	18.23	27.83	12.85	15.76	45.68	23.32	30.87	26.27
Horse labor	--	--	.09	.30	--	--	--	--	.15	--
Interest on investment	3.50	2.04	3.48	3.78	3.05	2.97	3.74	3.01	3.33	3.87
Building expense	2.02	1.95	1.95	3.28	1.66	1.00	4.83	2.86	1.95	2.34
Equipment expense	.31	.29	.24	.77	.16	.36	1.44	.17	.30	.02
Veterinary, medicine and testing	3.45	--	--	--	--	3.31	1.54	--	--	--
Gen'l farm expense	19.38	9.06	8.96	13.87	10.04	9.60	27.33	11.67	14.34	13.87
Miscellaneous	2.80	1.50	1.46	3.51	5.49	1.03	4.11	1.84	1.87	9.32
TOTAL COST	\$133.53	\$ 70.12	\$ 93.96	\$129.98	\$ 74.73	\$ 79.39	\$158.09	\$122.57	\$127.74	\$129.63
INCOME PER ANIMAL UNIT										
Milk	\$122.37	\$ 58.38	\$ 53.40	\$ 84.52	\$ 42.98	\$ 43.07	\$101.02	\$ 81.46	\$ 75.61	\$ 69.80
Increase	7.17	7.59	31.91	35.44	20.51	24.43	39.60	21.84	34.71	32.91
Manure	1.00	.90	1.68	.68	1.52	.72	5.05	6.54	2.04	2.89
TOTAL INCOME	\$130.54	\$ 66.87	\$ 86.99	\$120.64	\$ 65.08	\$ 68.22	\$145.67	\$109.84	\$112.36	\$105.60
NET PROFIT PER ANIMAL UNIT	\$ -2.99	\$ -3.25	\$ -6.97	\$ -9.34	\$ -9.65	\$ -11.17	\$ -12.42	\$ -12.73	\$ -15.38	\$ -24.03
FEED PER ANIMAL UNIT										
Farm grains	5 037	1 055	321	1 848	1 060	748	2 276	2 859	2 322	2 241
Millfeeds	--	--	20	--	23	30	--	32	309	63
Hay	2 000	2 488	2 086	2 028	2 413	2 256	4 816	3 523	3 646	4 027
Silage	--	--	--	--	--	--	--	--	--	--
Straw	333	78	397	--	239	301	234	852	1 138	784
Whole milk	29	343	1 748	1 940	334	850	358	1 111	425	881
Skim milk	--	--	511	--	--	--	960	--	1 287	--
Pasture days	275	223	353	309	240	247	196	241	248	205
LABOR PER ANIMAL UNIT										
Man hours	63.5	47.4	60.85	87.8	40.0	50.7	125.3	73.6	98.4	82.5
Horse hours	--	--	1.2	.8	--	--	--	--	.56	--
MILK PRODUCED PER COW										
Value of milk per cow	8 324	5 399	6 097	7 411	3 996	7 495	8 710	7 733	8 129	7 136
Number of animal units	\$122.37	\$101.18	\$ 89.63	\$108.94	\$ 75.05	\$110.18	\$128.04	\$113.68	\$119.50	\$113.29
Number of dairy cows	3.0	12.86	10.07	4.93	18.86	3.325	4.88	6.315	12.96	9.56
	3.0	7.42	6.0	3.825	10.80	1.30	3.85	4.525	8.20	5.89

Table 13.--Cost items and income (animal unit basis) for milk cattle on 26 farms
Champaign-Piatt Counties--1941 (Farms ranked in order of net profit for each animal unit)

Items	Farm number					1941 average of 26 farms	1940 average of 29 farms	1939 average of 27 farms
	49	27	95	63	56			
COST ITEMS PER ANIMAL UNIT								
Feed	\$ 71.33	\$ 48.66	\$ 50.45	\$ 91.25	\$ 82.30	\$ 62.88	\$ 48.68	\$ 49.27
Man labor	26.99	52.95	23.20	27.46	32.76	25.16	20.57	19.34
Horse labor	--	--	.03	--	.21	.11	.19	.18
Interest on investment	3.84	3.82	4.17	5.19	3.68	3.63	3.17	3.03
Building expense	.38	12.56	6.68	1.22	2.06	2.80	2.83	3.18
Equipment expense	.09	.09	.15	.03	.08	.42	2.04	1.57
Veterinary, medicine and testing	--	--	1.20	2.31	1.34	.92	1.55	.62
Gen'l farm expense	30.11	45.05	17.36	17.73	19.09	13.53	13.17	12.75
Miscellaneous	.52	25.01	1.61	3.36	1.42	7.87	3.92	5.37
TOTAL COST	\$133.26	\$188.14	\$104.85	\$148.55	\$142.94	\$117.32	\$ 96.12	\$ 95.31
INCOME PER ANIMAL UNIT								
Milk	\$101.70	\$178.07	\$ 41.27	\$ 72.13	\$ 68.95	\$ 84.67	\$ 63.75	\$ 70.32
Increase	2.61	-25.96	30.17	40.99	36.11	25.83	23.96	24.55
Manure	3.93	7.74	1.48	2.83	1.67	2.87	1.94	2.18
TOTAL INCOME	\$108.24	\$159.85	\$ 72.92	\$115.95	\$106.73	\$113.37	\$ 89.65	\$ 97.05
NET PROFIT PER ANIMAL UNIT	\$ -25.02	\$ -28.29	\$ -31.93	\$ -32.60	\$ -36.21	\$ -3.95	\$ -6.47	\$ 1.74
FEED PER ANIMAL UNIT								
Farm grains	3 955	1 582	1 723	4 034	3 279	1 967	1 934	1 895
Millfeeds	--	--	--	--	206	123	47	17
Hay	2 391	4 050	2 650	5 000	4 252	3 331	2 951	2 617
Silage	--	--	--	--	--	171	108	--
Straw	870	736	46	1 038	--	379	394	402
Whole milk	--	--	500	757	478	464	398	501
Skim milk	--	--	403	291	--	143	203	309
Pasture days	314	282	230	218	221	224	221	241
LABOR PER ANIMAL UNIT								
Man hours	79.3	167.06	82.6	91.7	107.46	80	73.38	80.80
Horse hours	--	--	.15	--	1.2	.5	.72	.10
MILK PRODUCED PER COW								
Value of milk per cow	7 956	8 684	5 308	5 250	6 332	6 513	6 500	6 391
Number of animal units	\$116.96	\$178.47	\$ 78.03	\$ 77.17	\$ 93.08	\$125.40	\$100.04	\$ 99.90
Number of dairy cows	2.30	2.716	8.49	2.6	4.86	9.92	8.65	7.30
	2.00	2.71	4.49	2.43	3.6	6.70	5.51	5.14

FEEDER CATTLE

Table 14.--Cost and income (head basis) for feeder cattle on 6 farms
Champaign-Piatt Counties--1941 (Farms ranked in order of net profit per head sold)

Items	Farm number						1941	1940	1939
	56	49	45	63	15	93	ave. of 6 droves	ave. of 8 droves	ave. of 9 droves
Number of head sold	111	45	29	5	29	32	42	38	37
Sales weight	1 044	1 132	1 041	1 024	822	1 550	1 098	944	996
Purchase weight	410	543	472	499	593	968	535	533	477
Gain in weight	634	589	569	525	229	582	563	461	520
Days on feed	414	354	334	346	176	372	335	285	314
Gain per head per day	1.53	1.66	1.70	1.52	1.30	1.56	--	1.62	1.66
PURCHASE VALUE PER HEAD SOLD	\$ 44.45	\$ 55.94	\$ 51.67	\$ 57.63	\$ 54.22	\$ 96.00	\$ 55.31	\$ 50.72	\$ 41.78
FEEDING COST PER HEAD									
Feed	\$ 61.44	\$ 53.69	\$ 64.21	\$ 66.81	\$ 35.13	\$ 101.69	\$ 62.57	\$ 43.44	\$ 36.92
Man labor	2.98	2.78	2.44	5.80	1.54	8.03	3.41	2.79	2.40
Horse labor	.32	.14	--	.09	--	.93	.29	.16	.14
Interest on investment	3.05	3.23	2.12	3.38	1.21	6.12	3.16	2.22	1.87
Building expense	1.29	.72	.99	2.42	1.86	.98	1.20	1.31	.71
Equipment expense	.24	.20	.32	.03	.57	.51	.31	1.03	.72
Gen'l farm expense	1.84	3.20	1.53	3.76	.96	5.12	2.40	2.02	1.54
Miscellaneous	.66	1.55	.86	4.52	1.32	2.62	1.25	.10	.16
TOTAL FEEDING COST	\$ 71.82	\$ 65.51	\$ 72.47	\$ 86.81	\$ 42.59	\$ 126.00	\$ 74.59	\$ 53.07	\$ 44.46
TOTAL COST PER HEAD	\$ 116.27	\$ 121.45	\$ 124.14	\$ 144.44	\$ 96.81	\$ 222.00	\$ 129.90	\$ 103.79	\$ 86.24
INCOME PER HEAD									
Sales value	\$ 124.85	\$ 125.59	\$ 114.14	\$ 123.62	\$ 80.56	\$ 165.80	\$ 123.82	\$ 104.28	\$ 96.22
Value of hog gains	7.45	5.43	4.74	6.57	2.45	9.47	6.44	2.34	2.20
Manure	1.45	2.16	1.44	2.44	1.75	7.70	2.43	1.96	1.92
TOTAL INCOME PER HEAD	\$ 133.75	\$ 133.18	\$ 120.32	\$ 132.63	\$ 84.76	\$ 182.97	\$ 132.69	\$ 108.58	\$ 100.41
PROFIT PER HEAD	\$ 17.48	\$ 11.73	\$ -3.82	\$ -11.81	\$ -12.05	\$ -39.03	\$ 2.79	\$ 4.79	\$ 14.17
PURCHASE PRICE PER CWT.	\$ 10.83	\$ 10.30	\$ 10.96	\$ 11.55	\$ 9.14	\$ 9.92	\$ 10.34	\$ 9.52	\$ 8.76
SALE PRICE PER CWT.	\$ 11.96	\$ 11.09	\$ 10.96	\$ 12.07	\$ 9.80	\$ 10.69	\$ 11.28	\$ 10.49	\$ 9.66
AMOUNT OF FEED (lb.)									
Corn	3 917	3 520	2 819	3 584	1 458	5 294	3 604	2 904	3 184
Oats	408	485	861	1 472	683	2 981	855	250	434
Millfeeds	312	251	320	100	79	623	310	175	198
Hay	1 727	617	1 897	2 200	1 293	3 625	1 749	2 384	1 064
Minerals and salt	7	11	11	25	12	27	11	11	9
Straw	185	183	621	960	200	1 106	370	301	288
Pasture days	24	97	63	4	98	45	52	63.40	69
LABOR									
Man hours	10.19	8.80	7.86	19.75	4.7	21.91	10.72	9.81	9.5
Horse hours	2.20	5.57	7.86	19.75	4.7	3.62	1.54	1.14	1.2
FEEDING COST PER 100 LB. GAIN	\$ 11.34	\$ 11.13	\$ 12.73	\$ 16.54	\$ 18.63	\$ 21.84	\$ 13.29	\$ 11.51	\$ 8.55

	89	92	49	63	45	94	71	91
Number of cows in herd	9.40	2.50	1.29	.96	12.04	9.63	22.71	8.05
Number of animal units	20.06	4.225	1.29	1.24	17.91	10.84	42.736	14.95
HERD COSTS								
Feed	\$1 061.18	\$163.45	\$ 86.08	\$ 67.80	\$567.98	\$343.65	466.39	\$ 862.95
Man labor	54.93	55.16	7.91	7.64	11.12	34.74	183.73	419.23
Horse labor	2.28	--	.19	--	--	--	13.55	--
Interest on investment	64.37	14.87	4.62	7.66	78.35	39.60	179.42	58.00
Building expense	8.76	71.79	--	5.60	80.37	92.35	80.07	56.80
Gen'l farm expense	54.56	27.33	8.83	4.93	6.77	20.78	95.81	181.66
Veterinary and medicine	8.97	1.50	--	--	5.60	17.00	19.00	32.61
Equipment expense	6.88	1.53	.39	.04	6.35	1.67	.86	10.60
Miscellaneous	25.86	20.96	2.83	11.48	3.92	9.98	37.30	30.47
TOTAL COST	\$1 287.79	\$356.59	\$110.85	\$105.15	\$760.49	\$559.77	\$3 076.13	\$1 652.32
HERD INCOME								
Sales and inventory increase	\$1 335.60	\$185.00	\$ 73.00	\$ 21.90	\$646.17	\$429.90	228.91	\$ 858.36
Milk	--	124.08	--	--	--	--	159.73	203.66
Value of hog gains	93.74	2.67	--	--	4.24	3.96	165.34	7.90
Manure	16.24	18.37	--	1.47	14.05	9.21	86.66	32.87
TOTAL INCOME	\$1 445.58	\$330.12	\$ 73.00	\$ 23.37	\$664.46	\$443.07	\$2 640.64	\$1 102.79
PROFIT PER HERD	\$ 157.79	\$-26.47	\$-37.85	\$-81.78	\$-96.03	\$-116.70	\$-435.49	\$-549.53
Returns to roughage and labor per animal unit	\$ 30.51	\$ 38.22	\$ -2.49	\$ -22.00	\$ 22.28	\$ 20.20	\$ 17.03	\$ 23.99
Total pounds beef produced	12 365	1 850	800	360	5 305	4 680	22 300	8 785
POUNDS FEED FED HERD								
Corn	47 600	1 344	3 360	--	2 352	3 640	92 960	9 912
Oats	10 048	1 344	--	--	5 360	--	34 496	20 736
Millfeeds	450	--	--	1 000	75	--	80	--
Hay	34 000	17 000	--	4 500	47 000	30 250	94 500	53 000
Minerals and salt	229	--	18	28	300	152	200	150
Straw and fodder	20 000	--	--	--	12 000	2 500	16 000	10 500
Pasture days	3 116	1 162	460	446	4 553	3 170	11 406	3 266
LABOR								
Man hours	178.75	178.00	23.25	25.50	35.75	108.75	635.25	102.9
Horse hours	6.00	--	1.00	--	--	--	60.00	--
PERCENT FEED VALUE THAT WAS:								
Grain	60.9	18.8	68.8	--	14.0	11.7	57.8	43.2
Protein supplement	1.3	--	--	29.2	.3	--	2.4	--
Minerals and salt	.3	--	.2	.4	.5	.5	.1	.2
Total concentrate	62.5	18.8	69.0	29.6	14.8	12.2	60.3	43.4
Hay and straw	21.1	42.4	--	34.5	46.8	41.4	15.0	33.9
Pasture	16.5	38.9	31.1	35.9	38.4	46.2	24.7	22.7
Total roughage	37.6	81.3	31.1	70.4	85.2	87.6	39.7	56.6

POULTRY (Total Flock)

Table 16.--Cost and income for entire flock on 26 farms
Champaign-Platt Counties--1941 (Farms ranked in order of total net profit from the poultry enterprise)

Items	Farm number									
	89	64	49	83	63	75	15	84	60	73
Number of hens in flock	169	217	79	113	86	66	131	107	99	117
Eggs per hen	120	147	93	118	148	46	151	117	88	151
COST ITEMS PER FLOCK										
Feed	\$319.84	\$310.10	\$101.44	\$197.86	\$242.04	\$171.96	\$360.69	\$197.56	\$167.53	\$185.72
Man labor	60.69	80.27	19.90	61.49	56.28	40.82	120.57	63.26	55.15	117.56
Horse labor	--	.45	--	--	1.13	.17	--	2.80	--	7.21
Interest on investment	9.76	15.49	4.01	6.45	4.02	5.70	8.26	5.72	6.23	4.23
Bldg. and equip. expense	47.06	53.88	16.38	27.54	16.69	37.56	47.35	24.28	18.23	41.94
Gen'l farm expense	60.28	53.13	22.19	27.12	36.34	19.63	72.12	48.07	27.58	51.39
Miscellaneous	23.41	18.68	1.72	14.27	8.13	10.36	43.20	12.31	4.76	29.31
Decrease	--	--	--	--	--	--	--	--	--	--
TOTAL COST	\$521.04	\$532.00	\$165.64	\$334.73	\$364.63	\$286.20	\$652.19	\$354.00	\$279.48	\$437.36
INCOME PER FLOCK										
Eggs sold	\$329.00	\$522.01	\$69.93	\$242.95	\$197.81	\$39.73	\$374.53	\$225.71	\$98.43	\$302.38
Eggs used	50.32	61.61	56.03	33.20	48.48	27.47	62.62	35.90	48.96	53.96
Manure	3.67	8.45	--	5.79	4.98	--	15.20	10.83	--	8.32
Increase and meat sales	345.01	118.77	157.84	163.70	209.63	310.08	288.90	145.34	182.43	108.70
TOTAL INCOME	\$728.00	\$710.84	\$283.80	\$445.64	\$460.90	\$377.28	\$741.25	\$417.78	\$329.82	\$473.36
NET PROFIT PER FLOCK	\$206.96	\$178.84	\$118.16	\$110.91	\$96.27	\$91.08	\$89.06	\$63.78	\$50.34	\$36.00
FEED FED FLOCK (lb.)										
Farm grains	22 095	14 804	6 810	13 216	13 344	9 976	12 480	12 852	10 240	9 496
Purchased concentrates	1 100	4 600	100	1 500	2 300	1 800	5 900	825	500	2 500
Skim milk	6 855	--	3 388	774	4 885	--	6 424	8 669	13 003	--
Litter	3 000	2 660	750	2 000	2 075	750	2 700	2 750	200	2 000
LABOR PER FLOCK										
Man hours	197.50	253.25	58.50	194.00	188.00	139.50	330.75	211.00	174.00	371.25
Horse hours	--	3.00	--	--	2.75	2.00	--	24.00	--	35.50
Number of eggs produced										
No. used in household	20 344	31 911	7 374	13 330	12 693	3 036	19 743	12 500	8 710	17 623
No. sold	3 725	3 214	2 923	1 732	2 529	1 403	3 267	1 859	2 419	2 815
No. used for hatching	16 519	28 697	4 151	11 598	10 164	1 603	16 476	10 627	6 156	14 808
NET RETURNS PER 100 HENS	100	--	300	--	--	30	--	14	135	--
NET COST PER DOZEN EGGS	\$122.46	\$82.41	\$149.57	\$98.15	\$111.94	\$138.00	\$67.98	\$59.61	\$50.85	\$30.77
	\$.160	\$.164	\$.120	\$.187	\$.184	\$.201	\$.234	\$.213	\$.172	\$.24

POULTRY (Total Flock) (Cont'd)

Table 16.--Cost and income for entire flock on 26 farms
Champaign-Platt Counties--1941 (Farms ranked in order of total net profit from the poultry enterprise)

Items	Farm number						1941	1940	1939
	79	67	62	66	94	91	average of 26 farms	average of 28 farms	average of 26 farms
Number of hens in flock	196	91	109	71	116	136	109	104	95
Eggs per hen	112	60	101	112	74	111	108	101	105
COST ITEMS PER FLOCK									
Feed	\$367.57	\$ 91.53	\$148.20	\$195.48	\$286.66	\$451.08	\$213.39	\$167.80	\$134.85
Man labor	234.42	74.32	64.81	81.50	73.26	170.50	82.06	65.16	52.59
Horse labor	--	--	.56	2.50	--	--	.92	1.02	1.19
Interest on investment	8.11	4.12	4.58	5.89	5.40	7.66	5.93	4.61	4.75
Bldg. and equip. expense	37.78	51.34	16.80	31.14	28.41	64.44	35.67	33.95	30.54
Gen'l farm expense	60.19	58.04	46.82	43.02	43.80	73.88	44.18	39.35	38.60
Miscellaneous	9.80	2.79	18.64	29.68	26.82	29.27	14.19	9.36	9.15
Decrease	--	--	--	--	--	--	--	4.65	--
TOTAL COST	\$717.87	\$282.14	\$300.41	\$389.21	\$464.35	\$796.83	\$396.34	\$325.90	\$271.67
INCOME PER FLOCK									
Eggs sold	\$441.93	\$ 97.70	\$163.07	\$ 66.60	\$127.84	\$249.37	\$184.44	\$132.71	\$111.59
Eggs used	27.37	13.42	9.78	71.99	6.37	69.68	42.84	36.51	30.47
Manure	15.35	--	10.16	6.00	4.31	9.57	5.31	4.78	4.41
Increase and meat sales	168.78	103.76	40.24	120.98	192.86	306.50	172.48	109.88	97.67
TOTAL INCOME	\$653.43	\$214.88	\$223.25	\$265.57	\$331.38	\$635.12	\$405.07	\$283.88	\$244.14
NET PROFIT PER FLOCK	\$-64.44	\$-67.26	\$-77.16	\$-123.64	\$-132.97	\$-161.71	\$ 8.73	\$-42.02	\$-27.53
FEED FED FLOCK (lb.)									
Farm grains	22 076	4 011	11 092	11 158	9 332	21 976	12 046	10 714	9 618
Purchased concentrates	3 500	1 210	500	1 500	6 800	3 200	2 028	1 825	1 893
Skim milk	400	200	--	442	--	5 154	2 447	1 697	1 682
Litter	500	250	750	2 100	1 000	2 500	1 523	1 104	994
LABOR PER FLOCK									
Man hours	776.75	232.50	253.25	256.00	229.25	418.50	261.80	238.80	218.10
Horse hours	--	--	6.00	8.00	--	--	4.81	5.46	6.90
Number of eggs produced									
No. used in household	21 960	5 448	11 006	7 968	8 586	15 139	11 839	11 015	9 951
No. sold	1 428	700	498	3 756	332	3 311	2 256	2 306	7 763
No. used for hatching	20 532	4 748	10 508	3 872	7 366	11 828	9 512	8 696	2 150
NET RETURNS PER 100 HENS	--	--	--	340	888	--	71	13	38
NET COST PER DOZEN EGGS	\$-32.88	\$-73.91	\$-70.79	\$-174.14	\$-114.63	\$-118.90	\$ 8.00	\$-42.37	\$-29.09
	\$.282	\$.321	\$.254	\$.306	\$.263	\$.317	\$.225	\$.230	\$.191

SHEEP

Table 17.--Cost and income for flocks on 10 farms
Champaign-Platt Counties--1941 (Farms ranked in order of net profit per flock)

Items	Farm number							
	94	72	89	83	60	90	66	91
COST ITEMS PER FLOCK								
Feed	\$216.88	\$109.67	\$ 41.76	\$ 29.39	\$ 60.16	\$ 5.80	\$ 17.17	\$ 29.70
Man labor	35.23	33.20	10.83	13.79	28.76	15.81	9.79	49.50
Interest on investment	19.55	10.52	4.94	3.75	2.46	1.36	2.64	2.92
Building expense	4.41	4.12	--	4.19	10.50	.52	--	1.95
Equipment expense	.92	.81	1.09	.08	.15	.06	.02	.57
Gen'l farm expense	21.06	19.95	10.76	6.08	14.39	7.77	5.17	21.45
Veterinary and medicine	5.90	--	--	--	--	--	--	--
Miscellaneous	21.17	11.67	3.52	2.91	.03	.34	.86	3.07
TOTAL COST	\$325.12	\$189.94	\$ 72.97	\$ 60.19	\$116.45	\$ 31.66	\$ 35.65	\$109.16
INCOME PER FLOCK								
Increase	\$379.47	\$188.88	\$ 67.32	\$ 49.20	\$ 99.21	\$ 16.50	\$ 10.50	\$ 34.01
Wool	48.80	95.20	40.10	19.16	12.25	3.35	10.88	23.20
Manure	3.70	3.55	.24	.81	--	--	--	.51
TOTAL INCOME	\$431.97	\$287.63	\$107.66	\$ 69.17	\$111.46	\$ 19.85	\$ 21.38	\$ 57.72
NET PROFIT PER FLOCK	\$106.85	\$ 97.69	\$ 34.69	\$ 8.98	\$ -4.99	\$ -11.81	\$ -14.27	\$ -51.44
FEED PER FLOCK (lb.)								
Corn	5 838	448	--	--	--	--	--	--
Oats	2 760	576	544	--	1 808	--	256	544
Soybeans	--	--	--	--	--	--	--	--
Millfeeds	--	100	--	--	--	--	--	--
Minerals	84	95	21	50	10	5	5	15
Hay	6 500	3 000	1 250	2 500	2 750	100	1 000	1 000
Straw	--	500	--	--	490	--	500	--
Pasture days	1 432	1 447	579	361	305	82	178	335
Whole milk	--	--	--	--	417.1	131.2	--	--
LABOR PER FLOCK								
Man hours	110.25	120.25	35.25	43.50	90.75	52.75	30.75	121.50
AVERAGE NUMBER OF SHEEP								
NUMBER OF EWES, JAN. 1, 1941	30	26	9	7	5	1	3	6
LAMBS PER EWE								
	8	22	9	7	--	--	--	4
	1.0	.9	.8	1.0	--	--	--	1.0

40.

LABOR AND POWER COSTSMan-Labor Costs

The total farm cost of man labor includes cash and perquisites furnished to hired labor in the form of board and room, or a house with land for a garden, and meat, milk, eggs, or other farm products, plus average local labor wages for the operator and members of his family. On the 290-acre farms, the total man-labor cost was \$1,427, of which \$598 was hired-labor cost.

For 1941, the hourly labor rates for the various farms varied from 26 cents to 41 cents an hour, with an average of 32 cents.

Table 18.--Man-Labor Cost, Including the Cost of Husking and Detasseling Corn

Item	Average of 28 farms		Your farm	
	Amount	Percent of total	Amount	Percent of total
Hired-labor cost				
Cash	\$414.84	69.4	\$ _____	_____
Perquisites				
Board	66.59	11.1	_____	_____
Food	27.71	4.6	_____	_____
Feed	33.50	5.6	_____	_____
Buildings and lots	55.46	9.3	_____	_____
Total	(\$183.26)	(30.6)	(\$ _____)	(_____)
Total	\$598.10	100.0	\$ _____	_____
Hours of labor performed by hired labor	1 879	--	_____	--
Cost an hour of hired labor (including husking and detasseling)	\$.318	--	\$ _____	--
Cost an hour of regular monthly labor	\$.317	--	\$ _____	--

Item	Average of 28 farms			Your farm		
	Cost	Percent of total cost	Hours of labor	Cost	Percent of total cost	Hours of labor
Hired labor	\$ 598.10	39.9	1 879	\$ _____	_____	_____
Custom labor	29.31	2.0	65	_____	_____	_____
Family labor	155.37	10.4	490	_____	_____	_____
Operator's labor	716.61	47.7	2 262	_____	_____	_____
Total labor	\$1 499.39	100.0	4 696	\$ _____	_____	_____
Labor off farm	\$ 72.04	--	219	\$ _____	_____	_____
Net labor on farm	\$1 427.35	--	4 477	\$ _____	_____	_____

Horse-Labor Costs

Only 20 of the 28 farmers used work horses in operating their farms, and on seven of the 20 farms the available horses were each worked less than 300 hours during 1941. On only two farms were horses used more than 700 hours. As a source of power on these farms, horses have declined to the point where with but few exceptions only one team is kept.

The net cost of feeding, housing, and caring for a horse in 1941 was \$66.74; and with the average yearly hours of work per horse only 387, the cost per hour of work was 17 cents.

Tractor Costs

All of the 28 farms used tractors; three of them had three on the farm for the year, 12 had two, and the remaining 13 had one. Thus a total of 46 tractors were used in operating the 28 farms. Of this number, 21 were bought to replace old machines in 1939, 1940, and 1941.

The drawbar-horsepower rating of each of the 46 tractors was obtained from the reports of the Nebraska Tractor Tests. According to these tests, the ratings of the 46 machines varied from 9.8 to 29.6 drawbar-horsepower. For the purpose of analysis and comparison, they were divided into three groups: (1) those with drawbar-horsepower ratings between 9.0 and 16.0, (2) those with ratings between 16.0 and 21.0, and (3) those with ratings between 21.0 and 30.0. This grouping is somewhat arbitrary, although there appeared to be a logical break in horsepower at the three ratings selected.

There was an insufficient number of tractors in the 9.0 to 16.0 drawbar-rating group from which to make an average. The cost per hour for the use of machines in this group varied from a low of 31 cents to a high of 54 cents. The average operating cost per hour in the 16.0 to 21.0 drawbar-rating group varied from a low of 35 cents to a high of 72.5 cents. The machine with the low hourly cost was used nearly three times as many hours as that with the highest hourly cost. Tractors in the 21.0 to 30.0 drawbar-rating group were nearly all used with three-bottom plows and other large tillage and harvesting machinery. The operating cost per tractor varied from 51 cents to 82 cents an hour. The average hourly cost of the 15 tractors in this group was 62 cents.

HORSE LABOR (Cont'd)

Table 19.--Net cost on 18 farms (49 work horses)

Champaign-Platt Counties--1941 (Items of cost and feed on number of horse units)

(Farms ranked in order of net cost per hour of horse labor)

Items	Farm number						
	95	92	73	71	93	74	66
Number of work horses	2.0	2.5	2.0	5.8	5.5	4.1	2.0
Number of horse units	2.0	2.5	2.0	5.8	7.6	4.1	2.5
COST ITEMS PER HORSE UNIT							
Feed	\$27.32	\$56.11	\$44.81	\$47.59	\$70.30	\$38.51	\$36.06
Man labor	11.76	10.95	16.43	8.00	17.00	9.04	4.89
Horse labor	--	--	--	.13	.59	1.59	--
Interest on investment	2.12	6.93	3.25	3.70	7.20	3.39	5.03
Depreciation	5.00	8.10	10.00	10.43	--	--	12.20
Shelter	8.56	12.76	2.33	3.12	8.34	1.23	1.21
Harness	3.29	3.71	.73	1.07	3.52	1.97	5.95
Veterinary	--	--	--	--	.88	--	--
Miscellaneous	2.07	6.67	2.18	1.46	2.60	1.36	1.34
TOTAL COST FOR YEAR	\$60.12	\$105.23	\$79.73	\$75.50	\$110.43	\$57.09	\$66.68
Appreciation	\$ --	\$ --	\$ --	\$ --	27.71	\$ 2.46	\$ --
Manure credit	1.05	9.03	2.90	1.69	4.81	1.50	1.73
NET COST FOR YEAR	\$59.07	\$96.20	\$76.83	\$73.81	\$77.91	\$53.13	\$64.95
AMOUNT OF FEED (lb.)							
Total concentrates	926	978	1 720	1 586	3 472	1 441	1 335
Corn	910	408	--	779	1 523	883	717
Oats	16	570	1 720	807	1 949	558	618
Hay	1 875	8 097	1 750	2 960	4 052	1 232	1 626
Other roughage	230	405	500	174	1 307	1 416	1 016
Pasture days	207	166	154	342	218	239	208
LABOR (chores)							
Man hours	41.87	35.32	51.87	28.00	45.75	28.80	15.24
Horse hours	--	--	--	.57	2.35	.60	--
Average hours worked by each horse	306.8	483.0	377.8	326.4	311.0	198.0	208.0
COST PER HOUR	\$.193	\$.199	\$.203	\$.226	\$.250	\$.269	\$.313
							\$.368
							\$ 34.12
							--
							172.0
							\$.368

HORSE LABOR (Cont'd)

Table 19.---Net cost on 18 farms (49 work horses)
Champaign-Piatt Counties--1941 (Items of cost and feed on number of horse units)
(Farms ranked in order of net cost per hour of horse labor)

Items	Farm number			1941 average of 18 farms	1940 average of 21 farms	1939 average of 26 farms
	47	89	60a/ 60a/			
Number of work horses	2.0	2.8	2.0	2.7	3.1	2.9
Number of horse units	2.0	2.8	2.0	3.0	3.2	3.3
COST ITEMS PER HORSE UNIT						
Feed	\$30.19	\$41.87	\$35.94	\$42.05	\$35.39	\$35.43
Man labor	11.95	10.22	1.31	11.07	8.49	8.78
Horse labor	--	--	.12	.24	.03	.09
Interest on investment	1.63	3.45	6.75	4.50	4.56	4.92
Depreciation	5.00	8.96	20.00	6.74	13.93	2.57
Shelter	8.09	.72	4.74	4.67	4.40	4.51
Harness	1.75	4.66	2.25	2.86	2.77	2.75
Veterinary	--	--	--	.31	.24	1.93
Miscellaneous	2.61	1.33	2.67	2.02	1.44	1.63
TOTAL COST FOR YEAR	\$61.22	\$71.21	\$73.78	\$74.46	\$71.25	\$62.61
Appreciation	\$ --	\$ --	\$ --	\$ 5.16	\$.04	\$ --
Manure credit	.33	.60	1.47	2.56	1.52	2.12
NET COST FOR YEAR	\$60.89	\$70.61	\$72.31	\$66.74	\$69.69	\$60.49
AMOUNT OF FEED (lb.)						
Total concentrates	1 096	1 158	548	1 478	1 602	1 733
Corn	--	--	420	680	725	838
Oats	1 096	1 158	128	798	876	895
Hay	750	1 165	2 600	2 429	2 507	1 828
Other roughage	--	1 452	1 500	705	594	666
Pasture days	274	337	334	251	237	268
LABOR (chores)						
Man hours	37.75	33.24	4.37	34.81	31.25	36.20
Horse hours	--	--	.25	1.15	.21	.50
Average hours worked by each horse	162.2	185.4	160.0	387.0	349.2	433.0
COST PER HOUR	\$.375	\$.381	\$.453	\$.173	\$.200	\$.160

a/ Not included in the average.

TRACTORS WITH DRAWBAR RATINGS BETWEEN 9.0 AND 16.0 HORSEPOWER^{a/}
 Table 20.--Total operating cost of tractor and hours of use for 4 tractors on the farm the entire year
 Champaign-Piatt Counties--1941 (Tractors ranked in order of net cost per hour of use)

Items	Farm number				
	91	79	63	27	84b/15c/
Horsepower rating	9.8	13.8	10.1	12.1	15.4
COST ITEMS PER TRACTOR					
Fuel and oil	\$68.67	\$97.96	\$105.90	\$79.66	\$36.68
Repairs	5.62	22.46	4.64	3.60	8.36
Man labor	10.19	3.05	1.80	7.45	.60
Shelter	21.13	.18	.06	3.82	.73
Depreciation	95.00	100.00	75.00	83.00	25.00
Interest on investment	27.00	23.50	22.50	26.65	3.42
Miscellaneous	1.08	--	2.67	--	--
TOTAL COST	\$228.69	\$247.15	\$212.57	\$204.18	\$76.09
HOURS TRACTOR USED					
Draw-bar work	735.00	522.25	494.75	375.50	111.50
Belt work	--	74.50	4.00	--	2.00
TOTAL HOURS USED	735.00	596.75	498.75	375.50	113.50
NET COST PER HOUR	\$.311	\$.414	\$.426	\$.544	\$.670
Year new	1939	--	1938	1937	1941
Hours of man labor (chores and overhauling)	25.00	10.00	6.00	23.50	2.00
Crop acres per farm	205.90	66.78	282.31	136.58	316.39
					255.97

a/ Ratings determined from Nebraska test reports.

b/ Tractor was traded May 5.

c/ Tractor was purchased August 16.

TRACTORS WITH DRAWBAR RATINGS BETWEEN 16.0 AND 21.0 HORSEPOWER^{a/}

Table 21.--Total operating cost of tractor and hours of use for 25 tractors

Champaign-Platt Counties--1941 (Tractors ranked in order of net cost per hour of use)

Items	Farm number									
	75	66	94	62	89	89	93	73	84	
Horsepower rating	16.3	19.3	19.1	16.1	18.9	19.2	20.5	16.1	19.2	
COST ITEMS PER TRACTOR										
Fuel and oil	\$153.58	\$143.34	\$ 83.61	\$142.26	\$149.67	\$ 23.23	\$140.32	\$ 50.50	\$102.29	
Repairs	72.12	55.67	4.14	10.35	23.69	10.59	34.99	.80	1.13	
Man labor	3.22	12.26	.64	5.37	6.45	.15	.63	.63	1.57	
Shelter	4.49	1.17	1.92	1.24	7.95	.84	3.48	4.67	4.07	
Depreciation	60.00	37.00	90.00	100.00	135.00	20.00	118.00	80.00	78.00	
Interest on investment	25.00	42.00	31.00	9.49	47.50	6.86	60.00	11.50	33.70	
Miscellaneous	3.81	4.37	2.29	--	.43	--	--	1.55	2.10	
TOTAL COST	\$322.22	\$295.81	\$213.60	\$268.71	\$370.69	\$ 61.67	\$357.92	\$149.65	\$222.86	
HOURS TRACTOR USED										
Drawbar work	873.00	719.00	502.75	607.25	831.00	136.50	726.75	237.50	431.75	
Bolt work	52.00	--	12.25	16.75	10.00	--	36.50	61.50	9.00	
TOTAL HOURS USED	925.00	719.00	515.00	624.00	841.00	136.50	763.25	299.00	440.75	
NET COST PER HOUR										
	\$.348	\$.411	\$.415	\$.431	\$.441	\$.452	\$.469	\$.501	\$.506	
Year new	1936	1937	1938	1937	1938	1941	1940	--	1941	
Hours of man labor (chores and overhauling)	11.00	38.50	2.00	21.00	21.00	.50	2.00	2.00	5.25	
Crop acres per farm	218.00	252.73	296.05	228.42	282.92	282.92	240.39	63.24	316.39	

a/ Ratings determined from Nebraska test reports.

TRACTORS WITH DRAWBAR RATINGS BETWEEN 16.0 and 21.0 HORSEPOWER^a(cont'd)
 Table 21.--Total operating cost of tractor and hours of use for 25 tractors
 Champaign-Piatt Counties--1941 (Tractors ranked in order of net cost per hour of use)

Items	Farm number								
	56	45	72	72	92	90	60	84	83
Horsepower rating	19.3	19.3	19.3	16.3	19.1	20.5	19.3	16.6	19.2
COST ITEMS PER TRACTOR									
Fuel and oil	\$122.02	\$ 33.50	\$149.21	\$107.61	\$ 99.64	\$92.99	\$125.67	\$122.64	\$154.32
Repairs	--	7.60	67.33	11.93	2.33	9.56	69.25	58.97	40.06
Man labor	5.79	3.73	1.10	1.93	.62	6.74	8.87	6.22	3.17
Shelter	4.05	1.75	2.59	2.59	2.35	4.19	1.67	6.10	4.74
Depreciation	140.00	40.00	140.50	115.00	125.00	157.50	90.00	90.00	100.00
Interest on investment	52.00	8.97	38.75	25.00	40.00	65.62	35.00	39.50	37.50
Miscellaneous	1.03	1.59	1.39	.91	2.32	.55	--	2.59	1.15
TOTAL COST	\$324.89	\$ 97.14	\$400.87	\$264.97	\$272.26	\$337.15	\$330.46	\$326.02	\$340.94
HOURS TRACTOR USED									
Drawbar work	620.00	185.00	751.50	471.00	496.00	613.00	592.75	576.50	612.00
Belt work	9.00	--	1.50	23.00	3.00	3.50	2.75	9.00	--
TOTAL HOURS USED	629.00	185.00	753.00	494.00	499.00	616.50	595.50	585.50	612.00
NET COST PER HOUR	\$.517	\$.525	\$.532	\$.536	\$.546	\$.547	\$.555	\$.557	\$.557
Year new	1939	1941	1937	1936	1939	1941	1937	1938	1939
Hours of man labor (chores and overhauling)	19.00	12.00	4.00	7.00	2.00	22.50	28.00	30.75	10.00
Crop acres per farm	346.10	436.64	305.90	305.90	543.15	289.53	176.41	316.39	112.73

^a/ Ratings determined from Nebraska test reports.

TRACTORS WITH DRAWBAR RATINGS BETWEEN 16.0 and 21.0 HORSEPOWER^a (cont'd)Table 21.--Total operating cost of tractor and hours of use for 25 tractors
Champaign-Piatt Counties--1941 (Tractors ranked in order of net cost per hour of use)

Items	Farm number						1941 average of 25 tractors		
	91	74	92	62	45	74			
Horsepower rating	16.3	20.5	19.1	20.5	19.3	16.3	20.5	16.9	19.4
COST ITEMS PER TRACTOR									
Fuel and oil	\$112.12	\$ 92.47	\$107.97	\$ 46.62	\$ 88.41	\$ 53.14	\$ 20.71	\$ 10.03	\$106.70
Repairs	69.54	29.50	8.60	68.94	35.05	28.30	.50	--	33.89
Man labor	11.82	--	.62	20.73	4.51	5.96	1.74	.91	4.59
Shelter	5.28	1.02	2.35	.61	2.46	1.02	1.50	2.65	2.99
Depreciation	105.00	134.00	120.00	33.50	115.00	125.00	50.00	35.00	93.94
Interest on investment	30.00	58.00	40.00	21.82	40.50	23.75	36.41	3.12	34.29
Miscellaneous	1.08	.55	2.15	2.18	5.25	.54	.71	--	1.69
TOTAL COST	\$334.84	\$315.54	\$281.69	\$194.40	\$291.18	\$237.71	\$111.57	\$ 51.71	\$278.09
HOURS TRACTOR USED									
Drawbar work	599.00	520.50	438.00	279.00	416.25	326.00	90.00	35.00	531.10
Belt work	--	21.50	--	6.00	--	2.00	--	--	11.23
TOTAL HOURS USED	599.00	542.00	438.00	285.00	416.25	328.00	90.00	35.00	542.33
NET COST PER HOUR	\$.559	\$.582	\$.643	\$.682	\$.700	\$.725	\$ 1.240	\$ 1.477	\$.528
Year new	1936	1941	1939	1941	1937	1936	1941	--	--
Hours of man labor (chores and overhauling)	29.00	--	2.00	81.00	14.50	19.00	6.00	3.25	15.58
Crop acres per farm	205.90	305.30	543.15	228.42	436.64	305.30	171.04	286.10	298.68

^a/ Ratings determined from Nebraska test reports.^b/ Tractor not on the farm entire year. Not included in the average.

TRACTORS WITH DRAWBAR RATINGS BETWEEN 21.0 AND 30.0 HORSEPOWER^{a/}Table 22.--Total operating cost of tractor and hours of use for 15 tractors
Champaign-Piatt Counties--1941 (Tractors ranked in order of net cost per hour of use)

Items	Farm number						
	49	67	63	80	15	45	56
Horsepower rating	21.2	26.2	24.8	25.7	21.2	29.6	24.4
COST ITEMS PER TRACTOR							
Fuel and oil	\$143.02	\$199.20	\$121.61	\$258.29	\$260.53	\$190.91	\$136.99
Repairs	54.79	27.62	64.63	--	1.85	20.75	--
Man labor	.08	4.87	.60	2.41	3.28	5.60	8.84
Shelter	2.88	1.92	4.31	5.84	1.73	2.81	4.64
Depreciation	80.00	125.00	75.00	165.00	125.00	170.00	200.00
Interest on investment	29.00	56.00	39.25	68.25	25.00	40.00	60.00
Miscellaneous	--	2.29	5.76	.40	3.78	4.53	1.56
TOTAL COST	\$309.77	\$416.90	\$311.16	\$500.19	\$421.17	\$434.60	\$412.03
HOURS TRACTOR USED							
Drawbar work	583.50	750.50	568.00	858.75	699.00	737.75	630.00
Belt work	29.75	58.50	11.50	58.50	21.00	--	40.00
TOTAL HOURS USED	613.25	809.00	579.50	917.25	720.00	737.75	670.00
NET COST PER HOUR	\$.505	\$.515	\$.537	\$.545	\$.585	\$.589	\$.615
Year new	1938	1940	1937	1940	1936	1936	1939
Hours of man labor (chores and overhauling)	.25	15.25	2.00	8.00	9.00	18.00	29.00
Crop acres per farm	289.64	296.05	281.31	160.61	255.97	436.64	346.10

^{a/} Ratings determined from Nebraska test reports.

TRACTORS WITH DRAWBAR RATINGS BETWEEN 21.0 AND 30.0 HORSEPOWER^a (Cont'd)
 Table 22.--Total operating cost of tractor and hours of use for 15 tractors
 Champaign-Platt Counties--1941 (Tractors ranked in order of net cost per hour of use)

Items	Farm number						1941 average of 15 tractors
	49	95	93	66	71	92	74
Horsepower rating	21.2	28.1	22.6	24.5	24.6	26.2	24.6
COST ITEMS PER TRACTOR							
Fuel and oil	\$114.79	\$273.99	\$251.43	\$215.32	\$ 86.84	\$141.77	\$ 98.18
Repairs	10.86	5.45	48.78	28.99	19.95	42.55	100.82
Man labor	1.70	31.17	2.97	55.07	7.23	--	--
Shelter	3.58	8.04	2.10	1.17	1.08	5.98	1.02
Depreciation	150.00	162.50	125.00	12.04	20.00	130.00	65.00
Interest on investment	46.25	56.53	67.50	4.62	6.00	51.73	25.00
Miscellaneous	--	12.05	7.38	.78	.70	12.40	.95
TOTAL COST	\$327.18	\$549.73	\$505.16	\$317.99	\$141.80	\$384.43	\$290.97
HOURS TRACTOR USED							
Drawbar work	509.25	845.75	716.00	434.50	193.00	481.50	350.00
Belt work	20.25	10.00	37.00	--	--	--	4.00
TOTAL HOURS USED	529.50	855.75	753.00	434.50	193.00	481.50	354.00
NET COST PER HOUR	\$.618	\$.642	\$.671	\$.732	\$.735	\$.798	\$.822
Year new	1938	1941	1940	1935	1937	1941	1934
Hours of man labor (chores and overhauling)	5.00	111.00	8.00	173.00	25.00	--	--
Crop acres per farm	289.64	286.10	428.47	252.73	171.04	543.15	305.30
							26.97
							301.45

^a/ Ratings determined from Nebraska test reports.

FARM EARNINGS

Farm earnings in 1941 were the highest of any year since the cost accounting work in Champaign and Piatt Counties began 21 years ago. These high earnings were due to exceptionally good average crop yields and to the advance in prices of crops and livestock on hand at the beginning of the year, as well as to the good prices paid for crops and livestock produced in 1941. This period of high income was in distinct contrast with such periods as the early 1930s, when farm income failed to exceed the operating expenses and gave no return for the use of capital. But farm debts are paid from long-term farm earnings. Over the entire period of this study, the earnings on these farms approximated 7.6 percent annually on the total farm investment. This return is probably two to three percent higher than the rate of interest received by the average of all farms in this same area. It is safe to assume, from the results of many studies made by this department, that the 1941 income of the average farm in the area approximated that of the lower one-third of the farms in this study.

THE ANALYSIS OF THE FARM BUSINESS

The costs, incomes, profits and losses, yields, labor and power requirements, other physical factors in crop production, and the feed and labor used for each livestock enterprise of the 28 farms in the study have been set forth in the preceding pages. The following tables (Tables 23, 24, and 25) bring together in convenient form some pertinent information dealing largely with the farms as a whole. The comparisons afforded here should be of particular value to the individual cooperator in his efforts to improve the management of the farm.

In Tables 23, 24, and 25, the farms are arranged in order of the rate earned on investment. The figures in the other columns do not run in any particular order insofar as the size of the figures is concerned. Farms differ in many respects, so usually a farm with a high income has some points of weakness and a farm with a low income has some points of strength.

At the foot of each column, figures are shown for the high- and low-income farms and for the average of the group. These figures are an aid in making comparisons with individual farms.

Description of Table 23 (Page 52)

Rate earned on capital represents the net income of the farm, expressed as a percentage of the total investment. The value of the labor of the farmer and his family is deducted as an expense, but no compensation is allowed for his management.

Total investment per acre is the combined value of land, improvements (except operator's dwelling), machinery, feed, grain, and livestock, as shown in the opening inventory, divided by the total farm acreage.

Operating capital per acre is the sum of the capital invested in the farm business other than real estate. The principal items in the operating capital are the investment in livestock, machinery, grain, and feed at the beginning of the year. A high operating capital usually indicates an intensive farm business.

(Continued on page 53)

Table 23.--Factors helping to analyze the farm business on 28 farms
Champaign-Piatt Counties--1941 (Farms ranked in order of rate earned on investment)

Farm No.	Rate earned on capital in percent	Acres in farm	Total investment per acre	Oper-ating capi-tal per acre	Farm build-ings per acre		Fencing per acre		Gross in-come per acre	Total ex-pense per acre	Net in-come per acre	Percent of cropland in				Crop yields per acre of			
					Invest-ment	Ex-pense	In-vest-ment	Ex-pense				Corn	Oats	Wheat	Soy-beans	Corn	Oats	Wheat	Soy
74	24.62	354.34	190.70	\$39.98	\$24.58	\$1.39	\$1.41	\$.31	\$70.06	\$23.10	\$46.96	32.86	10.85	11.08	41.31	74	69	32	34
15	21.60	340.57	198.95	40.18	26.29	1.90	4.13	.72	80.82	37.85	42.97	46.50	22.36	--	23.51	83	50	--	36
79	20.50	99.60	181.71	52.69	41.22	1.95	1.45	.47	81.16	43.91	37.25	38.36	23.24	--	27.45	74	36	--	25
80	20.02	202.49	193.99	46.88	18.43	1.86	1.78	.72	83.78	44.93	38.85	37.34	15.84	--	37.41	69	41	--	32
89	19.43	314.40	200.19	39.25	18.15	.92	1.08	.29	58.93	20.02	38.91	38.90	25.47	--	26.22	85	47	--	32
56	17.66	418.24	212.85	59.40	20.39	1.66	.95	.44	76.57	38.98	37.59	36.75	19.98	5.25	26.29	83	40	32	29
84	17.42	347.90	163.25	19.98	16.92	1.54	.57	.21	51.74	23.29	28.45	33.95	16.97	3.07	35.60	67	47	25	31
63	17.07	318.55	176.34	29.80	20.05	1.07	.64	.16	44.70	14.60	30.10	36.00	17.87	--	32.40	63	36	--	30
92	16.86	562.56	185.17	21.70	13.81	.96	1.05	.18	43.62	12.40	31.22	31.47	8.68	6.49	27.30	86	56	28	28
62	16.71	279.47	149.64	21.69	12.57	.95	.93	.20	43.79	18.78	25.01	31.02	11.12	9.36	43.30	67	14	19	21
75	16.65	309.29	156.90	33.40	16.38	1.11	.78	.19	43.60	17.48	26.12	30.86	3.04	19.59	36.56	71	6	16	26
95	16.39	317.53	161.43	30.06	24.47	2.27	.51	.54	50.40	23.94	26.46	27.10	--	11.51	48.40	62	--	14	23
67	15.79	193.44	194.40	47.56	28.17	1.46	.36	.24	54.29	23.59	30.70	35.09	19.96	--	39.82	59	37	--	28
64	15.09	262.49	202.05	45.18	46.01	2.76	1.39	.48	49.79	19.30	30.49	31.89	14.32	20.34	22.04	69	47	19	33
90	15.05	330.28	164.81	21.47	33.63	1.76	.71	.33	38.87	14.07	24.80	34.33	21.77	--	31.39	60	46	--	29
47	15.01	201.48	163.21	30.35	28.57	.92	.40	.13	38.39	13.89	24.50	29.44	19.27	11.31	38.54	69	47	23	20
91	14.94	241.16	194.89	38.88	41.06	2.36	2.82	.91	53.34	24.22	29.12	49.75	20.50	--	21.08	65	40	--	27
93	14.23	536.87	237.37	50.79	28.70	2.87	2.18	.58	68.98	35.20	33.78	36.53	12.58	6.39	31.89	99	58	21	37
45	13.64	518.15	215.45	53.47	35.30	1.93	.87	.23	53.01	23.62	29.39	35.02	15.29	10.41	25.25	73	44	29	31
60	13.55	199.70	197.87	34.97	24.71	1.14	.91	.19	43.55	16.74	26.81	32.89	16.59	12.16	21.35	80	34	28	37
72	13.38	357.09	161.07	22.98	17.43	1.20	.39	.31	43.20	21.65	21.55	38.34	7.51	8.35	40.24	54	56	26	27
94	13.33	176.92	219.47	64.47	48.95	3.45	.85	.52	62.64	33.38	29.26	36.83	12.17	--	43.38	63	35	--	24
27	13.18	158.47	206.59	28.56	39.17	2.64	1.01	.28	42.42	15.18	27.24	36.38	--	--	51.15	81	--	--	28
73	13.06	79.07	211.35	50.31	55.46	2.28	3.73	.96	62.59	34.99	27.60	29.89	24.24	--	21.44	57	49	--	26
49	12.84	326.78	185.41	47.76	13.69	1.16	1.47	.35	51.11	27.29	23.82	33.11	13.70	8.72	25.32	72	33	8	23
66	12.21	283.42	151.52	23.37	17.08	.89	.12	.11	45.79	27.29	18.50	32.35	19.29	--	19.67	65	30	--	24
71	11.71	239.84	175.41	33.03	18.50	1.30	2.04	.52	38.84	18.31	20.53	36.99	14.67	11.42	29.89	64	60	20	23
83	11.12	145.57	155.15	34.69	18.09	2.30	.92	.34	39.31	22.06	17.25	37.96	18.48	--	21.88	60	41	--	29
High	24.62	562.56	237.37	64.47	55.46	3.45	4.13	.96	83.78	44.93	46.96	49.75	25.47	20.34	51.15	99	69	32	37
Low	11.12	79.07	149.64	19.98	12.57	.89	.12	.11	38.39	12.40	17.25	27.10	3.04	3.07	19.67	54	6	8	20
Av.	15.82	289.85	187.41	37.37	24.76	1.55	1.22	.37	55.54	24.72	30.82	35.08	14.34	6.22	31.53	72	45	24	29

Investment and expense under farm buildings per acre is the total building investment and annual expense reduced to an acre basis. High figures often show overinvestment in buildings, and very low figures often indicate inadequate equipment.

Investment and expense under fencing per acre may represent a considerable burden.

Gross income per acre is the sum of sales, increases in inventory, products used in the household, and perquisites furnished to labor, divided by the total farm acreage. The total expense includes cash expenditures, decreases in inventory, perquisites furnished labor, and the value of unpaid labor of farm operator and family.

Net income per acre is the difference between the gross income and the total expense an acre.

Description of Table 24 (Page 54)

Crop acres in farm indicates the acreage upon which work was performed, such as preparing a seedbed, planting, or harvesting.

Investment and expense under crop machinery per crop acre is the burden each acre of crops must bear for the machinery (not including power) which is necessary to work it. The proper balance between modern equipment and low cost is an ever-present problem on most farms.

Man labor cost per crop acre is the value of hired labor plus the value of the time of the farm operator and members of the farm family. This time is charged at hired man's wages and is distributed over each crop acre in the farm.

Power cost per crop acre includes the acre cost of horse labor, tractor power, truck expense, and the farm share of automobile expense. It is one of the larger farm expenses.

Power and machinery cost per crop acre is the total of the power cost and machinery expense shown per crop acre.

Labor, power, and machinery cost per crop acre includes the combined cost of these three items.

Man labor under cost per \$100 gross income represents the proportion of the income required to pay the total labor bill (operator, family, hired labor, and perquisites).

Power and machinery under cost per \$100 gross income is that percentage of the total income of the farm represented by the machinery and horse costs.

Total farm under costs per \$100 gross income is the proportion of all income required to pay total expenses.

(Continued on page 57)

66	12.21	252.73	5.85	1.88	6.54	3.75	5.63	12.17	12.73	10.97	59.60	109.41	.318	.313	--	.411	.732
71	11.71	171.04	3.78	1.95	6.55	4.78	6.73	13.28	12.02	12.37	47.14	108.94	.289	.226	--	--	.735
83	11.12	112.73	5.99	1.92	7.78	3.12	5.04	12.82	15.32	9.93	56.12	91.65	.317	--	--	.557	--
High	24.62	543.15	15.95	4.10	24.58	5.74	8.99	33.21	20.30	13.91	59.60	284.37	.407	.940	.670	.725	.822
Low	11.12	63.24	1.74	1.48	2.54	2.57	4.07	6.61	5.44	6.16	28.44	53.01	.256	.077	.311	.348	.505
Av.	15.82	245.59	7.31	2.24	5.81	3.56	5.80	11.61	9.09	9.07	44.50	124.04	.317	.173	--	.528	.615

a/ A = Tractors with ratings from 9.0 to 16.0 horsepower.
 B = Tractors with ratings from 16.0 to 21.0 horsepower.
 C = Tractors with ratings from 21.0 to 30.0 horsepower.

Table 25.--Factors helping to analyze the farm business on 28 farms
Champaign-Piatt Counties--1941 (Farms ranked in order of rate earned)

Farm No.	Rate earned	Labor and man- agement wage	Acres in farm	Hours man labor performed on farm		Man equiv- alent per farm	Percent hired labor is of total labor cost	G.F.E. per hour man labor	Invest- ment per acre in prod. L. S.	Live- stock income per acre	Returns per \$100 invested in pro- ductive L. S.	Returns per \$100 feed fed				Feed fed per acre to prod. L.S.
				By op- erator	By hired labor	Total for farm						Wage per acre	Cost of feed	Cost of country	Cost of feed	
74	24.62	\$13781.00	354.34	1649	4440	6446	2.85	\$1.46	\$5.98	\$21.48	\$358.97	\$150	\$210	\$173	\$193	\$11.15
15	21.60	11953.91	340.57	2189	3018	5315	2.35	.218	7.58	24.67	325.57	192	184	206	187	13.17
79	20.50	3946.38	99.60	3568	1062	5428	2.40	.077	22.00	56.41	256.41	240	223	178	229	24.60
80	20.02	6780.73	202.49	2704	4041	6848	3.03	.127	11.75	31.58	268.83	208	204	162	192	16.44
89	19.43	9739.37	314.40	1798	837	3876	1.73	.305	8.51	13.78	161.90	140	171	228	164	8.40
56	17.66	11917.69	418.24	1675	3756	5628	2.49	.178	18.44	27.85	151.00	128	192	192	139	20.10
84	17.42	7649.55	347.90	1840	2150	4366	1.93	.228	6.08	7.98	131.20	166	233	211	186	4.29
63	17.07	7267.58	318.55	1326	1011	2655	1.17	.193	5.19	10.42	200.78	106	225	190	182	5.73
92	16.86	12925.20	562.56	1804	1717	4313	1.91	.154	.89	2.03	228.20	202	221	248	215	.94
62	16.71	5402.46	279.47	1580	2666	4617	2.04	.185	6.27	10.45	166.55	191	258	151	215	4.87
75	16.65	6682.10	309.29	3220	1940	5314	2.35	.141	7.27	17.18	236.45	170	226	219	193	8.92
95	16.39	6545.61	317.53	1889	2023	5700	2.52	.210	5.96	8.54	143.17	145	179	266	174	4.91
67	15.79	5061.00	193.44	2494	119	2700	1.19	.250	10.94	13.32	121.66	143	170	235	155	8.59
64	15.09	5910.05	262.49	1738	--	4309	1.90	.210	7.65	17.34	226.80	233	241	229	236	7.35
90	15.05	6525.92	330.28	3331	2722	6257	2.77	.147	5.74	9.28	161.69	146	158	239	162	5.72
47	15.01	3825.92	201.48	1634	6	1942	.86	.158	5.30	9.77	184.40	157	202	191	184	5.30
91	14.94	5330.58	241.16	2052	1995	4220	1.87	.177	7.45	16.53	221.94	128	173	141	153	10.81
93	14.23	12899.42	536.87	2963	7465	10441	4.62	.219	13.94	13.82	99.17	106	133	--	112	12.35
45	13.64	10301.25	518.15	2002	3078	6385	2.78	.189	8.38	10.70	127.72	118	181	133	136	7.87
60	13.55	3640.08	199.70	787	--	1940	.86	.159	2.81	5.75	204.52	138	199	197	156	3.69
72	13.38	5536.09	357.09	2260	2712	5030	2.22	.166	7.17	7.47	104.13	151	79	189	161	4.63
94	13.33	4040.14	176.92	2461	402	3044	1.35	.191	14.87	18.58	124.92	152	180	116	161	11.54
27	13.18	3408.64	158.47	1754	--	1879	.83	.270	1.63	3.31	203.24	329	--	558	354	.94
73	13.06	2058.83	79.07	2166	6	2206	.98	.138	22.13	36.33	164.13	193	225	255	213	17.03
49	12.84	5299.51	326.78	1505	971	3179	1.41	.379	9.42	12.08	128.20	128	147	280	137	8.83
66	12.21	3909.18	283.42	2424	1935	5219	2.31	.168	4.84	8.49	175.61	143	204	136	164	5.16
71	11.71	3330.60	239.84	1607	1037	3546	1.57	.151	16.96	14.93	88.05	109	80	166	116	12.87
83	11.12	2308.71	145.57	2719	41	2773	1.23	.140	4.90	14.97	305.59	232	173	225	206	7.28
High	24.62	13781.00	562.56	3568	7465	10441	4.62	.379	22.13	56.41	358.97	329	258	558	354	24.60
Low	11.12	2058.83	79.07	787	6	1879	.83	.077	.89	2.03	88.05	106	79	116	112	.94
Av.	15.82	6713.48	289.85	2112	1827	4481	1.98	.181	8.32	14.04	168.71	145	191	190	165	8.51

Description of Table 25 (Page 56)

Labor and management wage is the income left to pay for the labor and management of the operator after all the other expenditures and the interest at 5 percent on the total farm investment have been deducted from gross income.

Hours of man labor performed per farm is the time devoted to the farm business by the operator, members of his family, and hired labor. The figure for operator's labor is growing smaller each year.

Man equivalent per farm represents the average number of men used on the farm and assumes that each man worked 2,262 hours per year, the average number of hours for the 28 operators.

The percentage of total labor cost which hired labor cost represents indicates the extent to which the farm is dependent on outside labor.

General farm expense includes miscellaneous expenditures of the farm, such as taxes on land in the farmstead, farm share of auto expense, farm bureau dues, farm papers, and the other expenditures which cannot be allocated directly to the productive farm enterprises. It also includes labor for the time spent in cutting hedgerows, cutting weeds in fence rows, etc. These general or overhead items are grouped together and proportioned to the crop and livestock enterprises on the basis of amounts of man labor used. The cost of these general farm expenses for each hour of labor used on the farm provides the basis of distributing this item.

Investment per acre in productive livestock includes the average of the beginning and closing inventories of livestock other than horses reduced to an acre basis.

Livestock income per acre and returns per \$100 invested in productive livestock vary with the kind of livestock; dairy cattle, hogs, and poultry usually show a more rapid turnover and higher relative returns than do beef herds and sheep.

Returns per \$100 feed fed is a good measure of livestock efficiency, although it obviously is affected by the relative prices of livestock and feed. To be profitable, livestock should pay more than market prices for feed, although some feeds used have little or no sales value.

Feed fed per acre to productive livestock indicates the intensity of livestock production on a farm.

Farm Efficiency Chart (Page 58)

Of the 52 comparisons shown in Tables 23, 24, and 25, seventeen have been selected as a basis for a farm efficiency chart.

When the position of each farm in these 17 factors is indicated on this chart, it shows the farm operator in a graphic way some of the more important factors of analysis of his farm business.

FARM EFFICIENCY CHART

Champaign-Piatt Counties--1941

The numbers between the lines across the middle of the page are the approximate averages for the 28 farms for the factors named at the top of the columns. A line drawn across each column at the number for your farm shows your efficiency as compared with that of the other farmers.

Rate earned on invest- ment	Crops						Livestock			Labor and power cost per hour				Power and machinery cost per crop acre	Labor, power & ma- chinery cost per crop acre	Size of farm
	Corn		Oats		Soybeans		Feed fed per acre	Income per acre	Re- turns per \$100 fed	Tractor horsepower						
	Yield per acre	Cost per bu.	Yield per acre	Cost per bu.	Yield per acre	Cost per bu.				Man	Horse	16-21	21-30			
23.00	100	--	73	--	--	--	22.50	35.00	235	--	--	--	--	--	--	570
22.00	96	--	69	--	--	--	20.50	32.00	225	.26	--	.35	--	--	--	530
21.00	92	--	65	.20	39	.45	18.50	29.00	215	.27	--	.38	--	--	--	490
20.00	88	--	61	.22	37	.48	16.50	26.00	205	.28	--	.41	.50	3.80	--	450
19.00	84	.19	57	.24	35	.51	14.50	23.00	195	.29	.05	.44	.53	4.30	6.00	410
18.00	80	.21	53	.26	33	.54	12.50	20.00	185	.30	.09	.47	.56	4.80	8.00	370
17.00	76	.24	49	.28	31	.57	10.50	17.00	175	.31	.13	.50	.59	5.30	10.00	330
15.82	72	.27	45	.30	29	.60	8.51	14.04	165	.32	.17	.53	.62	5.80	11.61	290
15.00	68	.30	41	.32	27	.63	6.50	11.00	155	.33	.21	.57	.65	6.30	14.00	250
14.00	64	.33	37	.34	25	.66	4.50	8.00	145	.34	.25	.60	.68	6.80	16.00	210
13.00	60	.36	33	.36	23	.69	2.50	5.00	135	.35	.29	.63	.71	7.30	18.00	180
12.00	56	.39	29	.38	21	.72	.50	2.00	125	.36	.33	.66	.74	7.80	20.00	140
11.00	52	.41	25	.40	19	.75	--	--	115	.37	.37	.69	.77	8.30	22.00	100
10.00	48	.44	21	.42	--	.78	--	--	105	.38	.41	.72	.80	8.80	24.00	60
9.00	44	.47	17	.44	--	.81	--	--	--	.39	.45	--	.83	9.30	26.00	--

SEVENTEENTH ANNUAL REPORT OF THE FARM BUREAU FARM MANAGEMENT SERVICE 1941 600 FARMS IN 22 COUNTIES



The Movement of a Maximum Wartime Load of Farm Products
From Any Farm Will Result From the Well-Balanced Effects of

- 1- High crop yields
- 2- Efficient livestock production
- 3- Efficient use of available labor
- 4- Effective use of buildings and machinery

Department of Agricultural Economics
University of Illinois, College of Agriculture
Extension Service in Agriculture and Home Economics
Urbana, Illinois
In Cooperation with Farm Bureaus in 22 Counties
May, 1942
AE-1842

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SEVENTEENTH ANNUAL REPORT OF THE
FARM BUREAU FARM MANAGEMENT SERVICE
FOR THE YEAR 1941^{1/}

M. L. Mosher, W. A. Herrington, B. E. King, M. P. Gehlbach, and H. C. M. Case^{2/}

The splendid response of Farm Bureau Farm Management Service cooperators to the defense program request of April, 1941, that corn-belt farmers increase the production of pork, milk, and eggs is shown by the increased production of these products in 1941 over that in 1940. The average increases per farm of these and other products were:

Pork--from 33,028 pounds to 38,066 pounds, an increase of 15 percent.
Milk--from 44,427 pounds to 47,546 pounds, an increase of 7 percent.
Eggs--from 1,068 dozen to 1,255 dozen, an increase of 18 percent.
Beef--from 18,812 pounds to 20,878 pounds, an increase of 11 percent.
All livestock--from 53,643 pounds to 60,519 pounds, an increase of 13 percent. There was a small decrease in the weight of mutton and wool produced.
Grain--from 181.1 tons to 217.7 tons, an increase of 20 percent.

The increases in the production of some farm products were due largely to the following factors:

- Pork--1. A 33-percent increase in number of fall pigs raised.
2. A 5-percent increase in the number of pigs weaned per litter.
3. A 5-pound increase in the average weight of hogs sold.
- Milk--1. A ~~18~~³⁴-percent increase in the number of cows milked.
2. An increase of 276 pounds of milk produced per cow.
- Eggs--1. A 9-percent increase in the number of hens in laying flocks.
2. A 5-percent increase in the number of eggs produced per hen.
- Grain--1. More favorable weather conditions.
2. A 21-percent increase in the acreages of soil-building legumes grown in 1939 and 1940 compared with 1938 and 1939.
3. The increased use of manure because of an 8-percent increase in the weight of livestock produced in 1939 and 1940 compared with 1938 and 1939.
4. The increased use of adapted and high-yielding seeds.

The maximum production of farm products in 1942 has been called for as a vital war measure. This report illustrates the fact that maximum production results from the well-balanced effects of high crop yields, efficient livestock production, the efficient use of all available labor, and the effective use of buildings and machinery.

^{1/} Records of 600 farms were included. About 75 other records were kept but were not used, because the farms were unusual or the records were received late.

^{2/} As Head of the Department of Agricultural Economics, H. C. M. Case gives general supervision to the project, which is under the direct supervision of M. L. Mosher.

Gross earnings are a useable measure of the amounts of crops and livestock produced on a farm for any one year in the area covered by these records, where most income comes from grain and livestock. The gross earnings per acre were 53 percent higher on the 120 most profitable farms than on the 120 least profitable ones, even though the soil of the former farms was slightly less productive than that of the latter group. The gross earnings per man were 19 percent higher for the 120 most profitable farms than for the 120 least profitable, although in this instance the most profitable farms averaged 64.8 acres smaller than the least profitable farms.

Farm Earnings in 1941. Average earnings of the farms in the Farm Bureau Farm Management Service were higher in 1941 than for any other year during the 17 years that the project has been carried on. These high earnings were due to good crop yields and to favorable prices received for grain, livestock, and livestock products sold or inventoried at the end of the year.

Earnings of farms shown in this report are much higher than those of typical farms in the same area. Repeated studies have shown that the average earnings of all farms in an area are much lower than those of the farms included in the Farm Bureau Farm Management Service.

As usual, wide differences in earnings were evident among farms having about the same opportunities. The net returns for capital and management averaged \$2,956 more on the 120 most profitable farms than on the 120 least profitable ones, although the most profitable farms averaged 64.8 fewer acres per farm than did the contrasting farms. The quality of the land was evidently somewhat better on the least profitable group of farms. Table 1.

Farms where large numbers of hogs were raised had a great advantage over other types of farms in 1941. The 120 most profitable farms had 64 percent more hogs at the beginning of the year (Table 3) and sold twice as many during the year (Table 17) as did the 120 least profitable farms. On the other hand, farms that produced beef cattle were at a disadvantage. This is revealed by the fact that the 120 least profitable farms had more than twice as many cattle at the beginning of the year and sold more than twice as many during the year as did the 120 most profitable farms.

Cooperators in the Farm Bureau Farm Management Service have a rare opportunity to use the good earnings of these war years to pay off present debts and to promote the war program, both by buying war bonds and by contributing to the Red Cross and similar organizations. The purchase of war bonds is patriotic and is also good business, because the purchaser can build up a reserve which can be easily converted into cash and which will be very useful when depression years come or when conditions are such that needed improvements can be made in the home and on the farm.

Organization of the Farm. The evident advantage which the smaller farms have over the larger ones, as shown in Table 1 and in the chart on page 10, is not due to any greater efficiency with which the smaller farms may be operated. Rather, this unusual situation found in 1941 is due largely to the price advantage which hogs have over cattle and grain, and to the fact that more hogs are commonly found on the smaller and medium-sized farms, while more cattle and grain are sold from the larger farms. (See also the chart on page 11.)

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Table 1.--Organization of Business and Expenses per Acre

Item	Your farm	All 600 farms	120 most profitable farms	120 least profitable farms
<u>Size and intensity of business</u>				
Size of farm--total acres	_____	265.0	222.6	287.4
Percent of land tillable.	_____	86.6	87.1	85.7
<u>Days of productive work</u>				
On crops.	_____	144.9	121.3	155.1
On livestock.	_____	295.6	329.9	278.6
Total days of productive work . .	_____	440.5	451.2	433.7
Per acre of farm.	_____	1.66	2.03	1.51
Feed per acre to productive livestock \$	_____	\$ 17.99	\$ 22.20	\$ 17.28
Gross earnings per acre	_____	44.12	54.28	35.58
Gross expense per acre.	_____	14.04	14.18	14.80
Net earnings per acre	\$	\$ 30.08	\$ 40.10	\$ 20.78
<u>Investments per acre</u>				
Land--all land in farm.	\$	\$ 119.09	\$ 110.98	\$ 119.94
(Improved land)	()	(126.58)	(118.01)	(127.65)
Farm improvements	_____	25.27	21.81	29.14
(Limestone and rock phosphate) ^{a/} . .	()	(1.14)	(1.08)	(1.11)
Operating capital	_____	45.51	44.92	46.96
Total investments per acre. . . .	\$	\$ 189.87	\$ 177.71	\$ 196.04
<u>Selected items of expense per acre</u>				
Farm improvements	\$	\$ 1.68	\$ 1.52	\$ 1.92
(Limestone and rock phosphate) ^{a/} . .	()	(.31)	(.31)	(.29)
Machinery and equipment	_____	3.38	3.28	3.66
Automobile.	_____	.55	.58	.58
Hired and home labor.	_____	5.37	5.56	5.58
Miscellaneous expense	_____	.27	.38	.25
Crop expense.	_____	.79	.77	.82
Livestock expense	_____	.36	.48	.37
Taxes	_____	1.55	1.51	1.55
Feed, grain, livestock decreases. .	_____	.09	.10	.07

a/ The limestone and rock phosphate are included with the farm improvements. The investments and expenses per acre of farm buildings and fences are the difference between the investments and expenses per acre of farm improvements and of limestone and phosphate.

More livestock was fed on the 120 most profitable farms than on the 120 least profitable ones, as is shown by the value of feed fed per acre, which was \$22.20 and \$17.28 respectively (Table 1).

Farm Expenses. The individual farmer may well study his expenses per acre in order to determine whether they are unduly high for one or more items (Table 1). However, in studying expenses, especially those for machinery and labor, he may wisely take into account the returns for such expenses as shown by the crop yields (Table 4), by the returns for feed fed to livestock (Tables 8 to 14), and by the conditions in which the farm and farmstead are kept.

Table 2.--Cash Balance, Inventory Changes, and Tenant's Farm Earnings

Item	Your farm	All 600 farms	120 most profitable farms	120 least profitable farms
<u>Cash balances</u>				
Total cash receipts	\$ _____	\$13 174	\$12 270	\$13 159
Total cash expenses	_____	8 197	6 829	9 938
Cash balance ^{a/}	\$ _____	\$ 4 977	\$ 5 441	\$ 3 221
<u>Inventory changes</u>				
Farm improvements	\$ _____	\$ 86	\$ 40	\$ 94
Horses	_____	-39	-25	-38
All productive livestock	_____	1 457	2 082	1 344
Feed and grain	_____	1 609	1 482	1 480
Machinery and equipment	_____	266	292	256
Automobile	_____	35	39	23
Total inventory changes	\$ _____	\$ 3 414	\$ 3 910	\$ 3 159
Rented farms--number		291	68	45
<u>Tenant's share</u>				
Capital investment	\$ _____	\$ 8 169	\$ 7 170	\$ 8 582
Returns for labor, capital, and management	\$ _____	\$ 5 056	\$ 5 978	\$ 3 359
Five percent of capital invested	_____	408	358	429
Labor and management earnings	\$ _____	\$ 4 648	\$ 5 620	\$ 2 930
<u>Landlord's share</u>				
Capital investment	\$ _____	\$39 744	\$32 754	\$42 388
Returns for capital investment	_____	3 601	3 755	2 774
Rate earned on investment	% _____	9.06%	11.46%	6.54%

^{a/} The cash balance as used in this report would be a true cash balance if all sales and purchases had been for cash. It is really the difference between sales and purchases.

Cash Balance and Inventory Changes. Both cash receipts and inventory increases were high in 1941. The average cash balance of \$4,977 found for the 600 farms included in this report was \$1,500 more than the average cash balance found for the same farms in 1940. The average inventory increase was \$3,046 higher in 1941 than in 1940. Table 2.

While the farmers on the 120 most profitable farms received the greatest returns on their investments, their average total cash receipts of \$12,270 were smaller than the \$13,174 average receipts returned to all of the 600 farms and the \$13,159 receipts paid to the operators of the 120 least profitable farms. This unusual situation is true because the 120 most profitable farms were of relatively small average size, while the average size of the 120 least profitable farms was larger.

Tenants' and Landlords' Earnings. The 291 tenants who kept records in this project received average earnings of \$4,648 for their labor and management. This amount includes about \$300 for the sale value of farm produce used in the home, but it does not include the value of the house rent, which would have cost about \$300 per tenant family at town and city rates. The landlords of the same 291 farms received average net incomes of 6.54 percent on their capital investments.

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Table 3.--Investments and Receipts, Expenses, and Earnings on Inventory Basis

Item	Your farm	All 600 farms	120 most profitable farms	120 least profitable farms
<u>Capital investments</u>				
Land.	\$	\$31 560	\$24 704	\$34 470
Farm improvements		6 696	4 856	8 374
Horses.		273	193	325
Productive livestock: Cattle. . .		3 156	1 974	4 472
Hogs. . . .		899	1 204	736
Sheep . . .		184	121	265
Bees. . . .		6	--	1
Poultry . .		111	107	111
Total productive livestock. . .	()	(4 356)	(3 406)	(5 585)
Feed and grain.		4 459	3 899	4 342
Machinery and equipment		2 731	2 291	2 978
Automobile (farm share)		241	209	267
Total capital investments . . .	\$	\$50 316	\$39 558	\$56 341
<u>Receipts and net increases</u>				
Horses.	\$	\$ --	\$ --	\$ --
Productive livestock: Cattle. . .		2 489	1 920	2 984
Dairy sales		737	640	656
Hogs. . . .		3 911	5 925	2 711
Sheep . . .		198	205	220
Bees. . . .		1	--	--
Poultry . .		151	134	149
Egg sales .		270	291	233
Total productive livestock. . .	()	(7 757)	(9 115)	(6 953)
Farm products used in household .		311	323	301
Feed and grain.		2 877	2 012	2 181
Labor off farm.		49	61	41
Miscellaneous		21	16	23
Soil conservation payments. . . .		678	556	726
Total receipts and net increases	\$	\$11 693	\$12 083	\$10 225
<u>Expenses and net decreases</u>				
Farm improvements	\$	\$ 445	\$ 338	\$ 551
Horses.		23	23	19
Productive livestock.		--	--	--
Feed and grain.		--	--	--
Machinery and equipment		896	730	1 053
Automobile (farm share)		146	129	167
Hired labor		694	489	894
Miscellaneous		72	84	73
Crop expense.		208	172	235
Livestock expense		96	108	106
Taxes		411	336	446
Total expenses and net decreases	\$	\$ 2 991	\$ 2 409	\$ 3 544
<u>Receipts less expenses (farm and family earnings)</u>				
Family labor.	\$	\$ 8 702	\$ 9 674	\$ 6 681
Returns for labor, capital, mgt..		149	134	154
Operator's labor.	\$	\$ 8 553	\$ 9 540	\$ 6 527
Returns for capital and management		582	613	556
Rate earned on investment	%	7 971	8 927	5 971
Interest on investment.	%	15.84%	22.57%	10.60%
Labor and management earnings . . .	\$	\$ 2 516	\$ 1 978	\$ 2 817
		6 037	7 562	3 710

Table 4.--Some Factors That Affect Farm Incomes

Item	Your farm	Average of 600 farms	120 most profitable farms	120 least profitable farms
1. Returns for capital and management.\$		\$ 7 971	\$ 8 927	\$ 5 971
2. Total capital investments		50 316	39 558	56 341
Rate earned (% 1 is of 2) ^a /		15.84	22.57	10.60
1. Gross earnings per acre ^b /	\$	\$ 44.12	\$ 54.28	\$ 35.58
2. Gross earnings on similar soil.		44.12	43.70	45.50 ^c /
Percent of average (% 1 is of 2)		100	124	78
1. Gross earnings per man ^b /	\$	\$ 6 059	\$ 7 150	\$ 4 823
2. Average earnings of all farms		6 059	6 059	6 059
Percent of average (% 1 is of 2)		100	118	80
1. Crop system rating (see p. 12) ^d /		67.0	67.9	66.3
2. Average crop system rating.		67.0	67.0	67.0
Percent of average (% 1 is of 2)		100	101	99
1. Corn yield - bushels per acre		73.3	76.3	67.9
2. Average yield on similar soil ^e /		73.3	72.0	73.5
Percent of average (% 1 is of 2)		100	106	92
1. Oats yield - bushels per acre		48.8	51.5	46.9
2. Average yield on similar soil ^e /		48.8	46.5	49.0
Percent of average (% 1 is of 2)		100	111	96
1. Wheat yield - bushels per acre.		22.6	23.1	19.6
2. Average yield on similar soil ^e /		22.6	22.0	22.0
Percent of average (% 1 is of 2)		100	105	89
1. Soybean yield - bushels per acre.		26.8	30.1	22.8
2. Average yield on similar soil ^e /		26.8	25.7	27.0
Percent of average (% 1 is of 2)		100	117	85
1. Crop yield index - all grain crops.		100	105	92
2. Crop yield index on similar soil ^e /		100	96	100
Percent of average (% 1 is of 2)		100	109	92

a/ The percent (%) that the first figure is of the second is obtained by dividing the first by the second, then multiplying the result by 100.

b/ Gross earnings are a measure which may be used to compare the amounts of farm commodities produced during any one year on different farms in an area where most of the products sold are either grain or livestock.

c/ The 120 least profitable farms were on slightly better land than the 120 most profitable farms. The former were valued at about \$9 per acre more and taxes were 4 cents more per acre. (Table 1).

d/ The crop-system rating measures the relative profitableness of the crop system as it varies with the relative amounts of different kinds of crops grown on tillable land. See page 12 for further explanations.

e/ The average yield on similar soil was obtained by taking the average yield of all farms on which the improved land had been given the same value per acre. See page 25.

Table 4.--Some Factors That Affect Farm Incomes (Continued from page 6)

Item	Your farm	Average of 600 farms	120 most profitable farms	120 least profitable farms
<u>Cattle</u>				
1. Feed fed - total value.	\$ _____	\$2 341	\$1 623	\$2 994
2. Returns - total value	_____	3 398	2 738	3 812
3. Returns at average rate ^{a/}	_____	3 398	2 420	4 143
Percent of average (% 2 is of 3)	_____	100	113	92
<u>Hogs</u>				
1. Feed fed - total value.	\$ _____	\$2 039	\$2 962	\$1 536
2. Returns - total value	_____	3 952	5 968	2 752
3. Returns at average rate ^{a/}	_____	3 952	5 716	2 986
Percent of average (% 2 is of 3)	_____	100	104	92
<u>Sheep</u>				
1. Feed fed - total value.	\$ _____	\$ 147	\$ 123	\$ 205
2. Returns - total value	_____	198	206	221
3. Returns at average rate ^{a/}	_____	198	180	261
Percent of average (% 2 is of 3)	_____	100	114	85
<u>Poultry</u>				
1. Feed fed - total value.	\$ _____	\$ 240	\$ 234	\$ 232
2. Returns - total value	_____	481	490	437
3. Returns at average rate ^{a/}	_____	481	473	469
Percent of average (% 2 is of 3)	_____	100	104	93
<u>All productive livestock</u>				
1. Feed fed - total value.	\$ _____	\$4 767	\$4 942	\$4 967
2. Returns - total value	_____	8 029	9 402	7 222
3. Returns at average rate ^{a/}	_____	8 029	8 789	7 859
Percent of average (% 2 is of 3)	_____	100	107	92

a/ The returns at average rate for any kind of livestock are the total returns which the cooperator receives from the feed fed if he receives the same returns for each \$100 worth of feed fed as that received by the average cooperator feeding the same class of livestock. The average returns per \$100 worth of feed fed to different classes of livestock were as follows:

Beef-cow herds	\$136	Native flocks of sheep	\$160
Dairy-cow herds	212	Feeder lambs bought	122
Dual-purpose herds	162	Native flocks and feeders	119
Beef-cow and dairy herds	157	Hogs	193
Feeders bought	124	Poultry	202
Beef cows and feeders	130		
Dairy cows and feeders	144		
Beef, dairy, and feeders	138		

Table 4.--Some Factors That Affect Farm Incomes (Concluded)

Item	Your farm	Average of 600 farms	120 most profitable farms	120 least profitable farms
<u>Labor</u>				
1. Cost of hired and home labor ^{a/}	\$ _____	\$1 396	\$1 202	\$1 575
2. Labor cost at normal rate ^{b/}	_____	1 396	1 360	1 385
Percent of normal (% 1 is of 2)	_____	100	88	114
<u>Horse and machinery</u>				
1. Cost for the farm ^{c/}	\$ _____	\$1 191	\$ 981	\$1 378
2. Cost at normal rate ^{d/}	_____	1 191	1 120	1 215
Percent of normal (% 1 is of 2)	_____	100	88	113
Size of farm - total acres ^{e/}	_____	265.0	222.6	287.4
Size of business - days of work ^{f/}	_____	440.5	451.2	433.7
Percent of tillable land in legumes ^{g/}	_____	25.3	25.8	26.8
Feed per acre to livestock ^{h/}	\$ _____	\$17.99	\$22.20	\$17.28

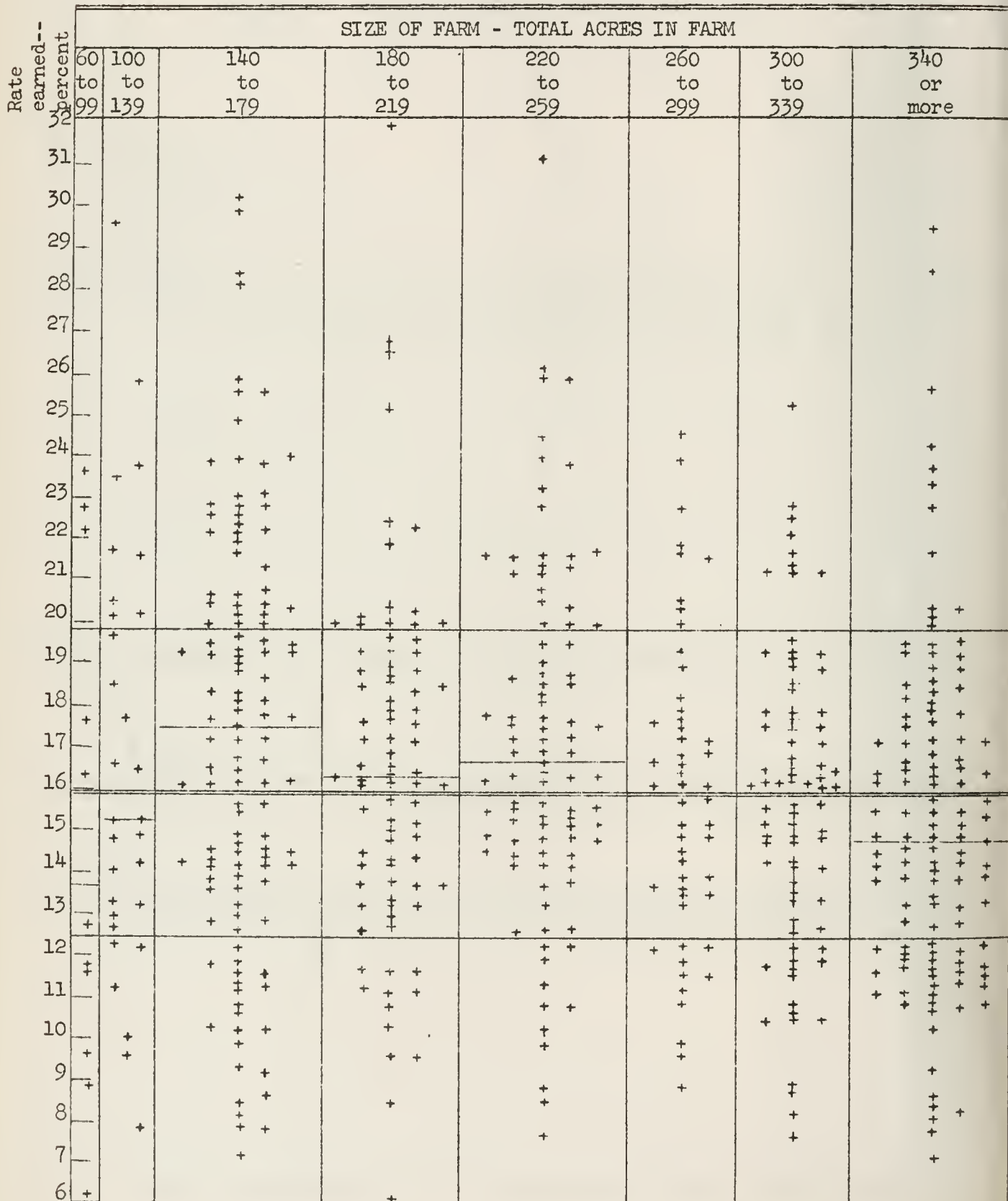
- a/ Labor cost includes the amount paid for hired labor, the value of family labor not paid for in cash, and the value of the operator's labor figured at the common rate of wages paid to good, married, men workers.
- b/ The labor cost at normal rate for any farm is the average labor cost for all the farms which require about the same amount of work on crops and livestock as the farm that is being considered.
- c/ Horse cost includes depreciation and feed costs. Machinery cost includes the cost of depreciation, fuel, supplies, and repairs.
- d/ The horse and machinery cost at normal rate for any farm is the average horse and machinery cost for all the farms which require about the same amount of work on crops and livestock as the farm that is being considered, and which receive little or no income from custom work.
- e/ It is unusual to find that the average size of the most profitable farms is much smaller than the average size of all farms and of the least profitable farms. (See the chart on page 10.) This is due to the fact that more hogs are grown on the small and medium-sized farms and that they proved much more profitable in 1941 than the beef cattle and cash grain which were grown on the larger farms. (See chart on page 11.)
- f/ A day of work (or a productive man-work unit) is the amount of work done on crops and livestock by the average farm laborer in one ten-hour day. (See page 22.)
- g/ Legumes, as used here, include only biennial and perennial legumes which occupy the land for the season.
- h/ On all farms feed is charged to livestock at uniform prices per bushel for grain and per day for pasture. Purchased supplements are charged at cost on each farm, and hay and silage are charged at the prices which prevail in the locality. (See Footnote a, Table 7.)

FARM EFFICIENCY CHART

Rate earned on total capital investments	Gross earnings factors													Costs—percent of normal		Organization			
	Gross earnings per acre—percent of average	Gross earnings per man—percent of average	Crop-system rating—percent of average	Crop yields—percent of average on similar soil					Livestock returns—percent of average from same feed							Size of farm—total acres	Size of business—estimated days of work	Percent of land in biennial and perennial legumes	Feed per acre to livestock—dollars
				Corn	Oats	Wheat	Soybeans	All grain crops	Cattle	Hogs	Sheep	Poultry	All livestock	Labor	Horses and machinery				
31.9	250	250	126	143	188	191	198	153	200	175	200	250	150	40	40	1009	1400	54	90
	The best one-fifth of the farms in each factor comes between this line and the next line below.																		
19.8	124	127	106	113	120	132	117	112	125	116	139	128	113	82	75	340	555	34	26
15.8	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	265	440	25	18
	The average of the farms in each factor comes to this line.																		
12.5	82	73	94	89	79	68	77	90	84	88	70	77	89	121	122	164	400	19	10
	The lowest one-fifth of the farms in each factor comes between this line and the bottom line.																		
5.9	50	40	82	38	32	26	20	60	40	50	35	20	60	200	200	72	110	0	1

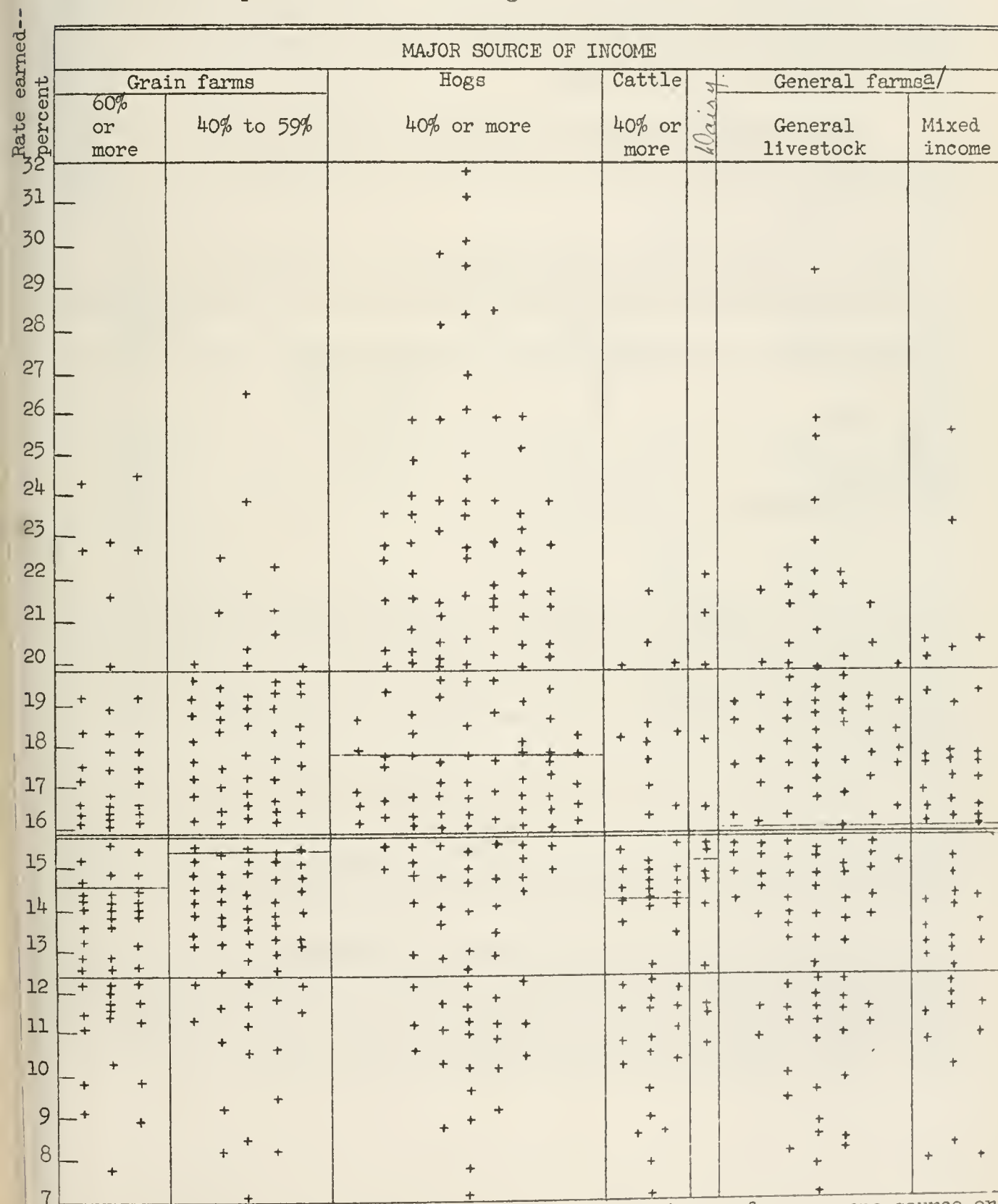
Size of Farm As Related to Rate Earned on Investment

Each sign (+) represents a farm as farms were distributed from the bottom to the top of the chart according to the rate earned on investment.



Source of Farm Income as Related to Rate Earned on Investment

Each sign (+) represents a farm as farms were distributed from the bottom to the top of the chart according to rate earned on investment.



^{a/} General farms have less than 40 percent of their income from any one source or have 40 percent or more from each of two sources. General livestock farms have 60 percent or more of their income from productive livestock, and mixed income farms have less than 60 percent of their income from productive livestock.

Land-Use and Crop-System Rating

The percent of tillable land occupied by high or low net-income crops is an important factor affecting net farm incomes. The percent in biennial and perennial legumes is also important, because it affects future crop yields. The crop-system rating used in this report indicates the relative net-income value of all the crops grown on tillable land.

The crop-system rating was calculated for each farm by multiplying the acres of each crop by the standard crop rating given in Table 5, by adding the ratings for all the crops grown on tillable land, and dividing the total by the number of tillable acres.

Table 5.--Standard Crop Ratings for Calculating a Crop-System Rating

Kind of crop	Crop rating	Kind of crop	Crop rating
Corn	80	Timothy hay	40
Oats	40	Soybean hay	50
Winter wheat	70	Sweet clover	70
Barley	60	Bluegrass	50
Soybeans for grain	70	Truck crops	100
Alfalfa hay	100	Sweet corn	80
Clover or mixed hay	50		

The ratings given to different crops in Table 5 are approximately in proportion to the average net earnings per acre to be expected on the tillable land if factors other than the crop system are equal. The crop ratings were made up from average results of several years of complete cost studies conducted by the Department of Agricultural Economics and from other experimental data. When the ratings were fixed, no credit was given to legumes for their soil improvement value.

Although the crop-system rating of the 120 farms with the highest earnings varied little from that of the 120 farms with the lowest earnings, individual farms showed marked differences. This fact is brought out in the Farm Efficiency Chart on page 9, where one-fifth of the higher-valued-land farms had crop-system ratings of 106 to 126 and another one-fifth had indices of only 82 to 94.

Of the 160 farms in the Farm Bureau Farm Management Service in western Illinois counties during 1938, 1939, and 1940, the 32 farms with the highest crop-system rating had more income, \$490 more per farm per year, than did the 32 farms with the lowest rating. Many farmers fail to realize on the high-income value of certain legume crops because they do not utilize these crops fully, either as seed-producing crops or as feed for livestock.

Table 6.--Crop-System Rating and Percent of Tillable Land in Different Crops

Item	Your farm	All 600 farms	120 most profitable farms	120 least profitable farms
Crop system rating (1)		67.0	67.9	66.3
Average crop system rating (2)		67.0	67.0	67.0
Percent of average [% (1) is of (2)]		100	101	99
<u>Percent of tillable land in:</u>				
<u>Grain crops</u>				
Corn--includes silage corn . . .		35.2	36.3	33.8
Oats		20.2	19.5	21.0
Wheat.		3.0	2.2	3.2
Barley		.4	.2	.6
Soybeans		7.7	9.0	5.2
Miscellaneous.		.2	--	.1
Total grain crops.		66.7	67.2	63.9
<u>Hay and pasture crops</u>				
Bluegrass.		1.9	1.3	2.3
Timothy.		1.0	.6	1.8
Clover and mixed		6.7	6.1	7.2
Alfalfa.		9.0	10.0	9.6
Sweet clover		8.2	7.9	8.5
Soybeans		.2	.2	.3
Miscellaneous.		2.3	2.7	1.9
Total hay and pasture crops. .		29.3	28.8	31.6
<u>Other crops</u> ^{a/}		4.0	4.0	4.5
All biennial and perennial legumes .		25.3	25.8	26.8
All annual legumes . . . , ...		8.1	9.3	5.8
Crops after first-year sweet clover.		3.1	4.6	2.2

^{a/} Other crops include clipped oats, soybeans plowed under, and clovers and timothy cut for seed, canning and truck crops, and other miscellaneous crops.

One of the most important and difficult problems that some corn-belt farmers have as a result of various soil conservation programs is that of utilizing efficiently the increasing acreages of legumes and grasses being grown for soil improvement and erosion control purposes. The incomes of farms that are being improved with limestone and legumes often suffer during the years before the legumes are effective in increasing crop yields. This fact is shown in Table 6 by the larger acreages of clover, alfalfa, and sweet clover on the 120 least profitable than on the 120 most profitable farms. However, the earnings of these farms may be expected to improve from year to year, especially if the legumes are used efficiently for feed for well-handled livestock.

Efficiency of Livestock Enterprises

On livestock farms the efficiency with which the livestock is produced or purchased, fed, and marketed is as important in making the net farm income high or low as are all the other factors combined. (See Bulletin 444, "Farm Practices and Their Effects on Farm Earnings," page 554.)

Since about 60 to 80 percent of all the costs of producing livestock is for the feed, the returns from livestock for \$100 feed fed is the most satisfactory single measure of efficiency for each class of livestock. The average returns per \$100 feed fed to different classes of livestock during 1941 are shown in Table 7. The returns on Farm Bureau Farm Management Service farms for each of six years, the average of the five years 1936 to 1940, and the average yearly price of corn are also shown in Table 7.

Table 7.--Returns per \$100 Feed for Different Classes of Livestock

Class of livestock	Returns per \$100 feed ^a /							Needed to pay cost ^c /
	1941 ^b /	1940	1939	1938	1937	1936	5 yr. aver.	
Beef cow herds	\$136	\$134	\$146	\$119	\$ 99	\$ 85	\$117	\$154
Dairy cow herds	212	198	204	193	159	150	181	175
Dual purpose herds	162	173	162	151	116	109	142	---
Beef cow and dairy herds	157	162	167	126	141	117	143	---
Feeders bought	124	136	131	142	106	96	122	120
Beef cows and feeders	130	134	143	142	116	102	127	---
Dairy cows and feeders	144	154	151	140	117	104	133	---
Dual cows and feeders	---	147	129	137	107	101	124	---
Beef, dairy, and feeders	138	147	150	137	124	103	132	---
Native flocks of sheep	160	142	136	98	123	109	122	---
Feeder lambs bought	122	149	136	153	50	101	118	---
Native flocks and feeders	119	141	133	122	72	103	114	---
Hogs	193	118	144	184	122	155	145	130
Poultry	202	177	195	208	157	180	183	190
Yearly price of corn per bushel	.63	.54	.43	.45	.91	.73	.61	---

a/ When the value of feed fed during 1941 was calculated, the grain was priced at the average farm prices for Illinois, reported by the Illinois Cooperative Crop Reporting Service as follows: corn, 63 cents; oats, 36 cents; barley, 55 cents; wheat, 93 cents; soybeans, \$1.24; rye, 52 cents. Purchased supplements were priced at cost, and hay, silage, and pasture were priced at farm values in the area.

b/ This column gives the returns at average rate referred to on page 7.

c/ This column gives the five-year-average returns per \$100 worth of feed which are needed to pay for the feed and labor, the use of equipment, and other costs which enter into livestock production. These data are taken from cost of production studies which were conducted in Champaign and Piatt Counties by the Department of Agricultural Economics.

Table 8.--Hog Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms		505	169	168
Total feed to hogs	\$ _____	\$ 2 358	\$ 2 025	\$ 2 611
Total returns from hogs	_____	4 544	4 628	4 264
Total returns at average rate	_____	4 544	3 908	5 039
Hog-efficiency index--% of aver. returns	_____	100	118	85
Returns per \$100 feed	\$ _____	\$ 193	\$ 229	\$ 163
Total pounds of pork produced	_____	43 768	44 115	41 584
Average weight per hog sold	_____	254	254	253
Returns per 100 lb. pork produced	\$ _____	\$ 10.38	\$ 10.49	\$ 10.25
Feed cost per 100 lb. pork produced	_____	5.39	4.59	6.28
Pigs farrowed per litter (143 farms)	_____	8.0	8.1	8.2
Pigs weaned per litter	_____	6.5	6.6	6.3
Pounds feed per 100 lb. pork	_____	420	357	492
Pounds protein feed per 100 lb. feed	_____	9.1	9.5	9.0
<u>Percent of feed value that was:</u>				
Grain	_____	80.4	79.6	80.9
Protein supplement	_____	17.2	17.8	16.9
Salt and minerals	_____	.5	.5	.5
Hay and pasture	_____	1.9	2.1	1.7
Price received per 100 lb. sold	\$ _____	\$ 9.18	\$ 9.31	\$ 9.05
Percent of sales for year on hand Jan. 1		38.4	38.1	39.9

a/ Farms were divided into groups according to the returns per \$100 feed fed to hogs. Only farms producing 10,000 pounds or more per farm were used in this comparison.

Hogs. Because of the demands of the defense program and because of prospective profits, Farm Bureau Farm Management Service cooperators produced 15 percent more pork per farm in 1941 than in 1940. Hogs proved unusually profitable on most farms in 1941 because the price relationship between corn and hogs was favorable to the latter. The average selling price of hogs for 505 farms was \$9.18 per 100 pounds. The average selling price of corn was 66 cents. (Table 17.) Thus 100 pounds of pork sold for a price equal to the farm value of 13.9 bushels of corn.

Hogs proved much more profitable on some farms than on others. One-third of the hog-producing farms received \$229 returns for each \$100 worth of feed fed. This amount was 118 percent of the average returns of \$193 received for \$100 worth of feed on all the farms. The least profitable third of the hog enterprises returned only \$163 for each \$100 worth of feed, which was only 85 percent of the average returns for all hog enterprises. The operators of each of these farms would have received nearly \$1,200 more net income if the returns from their hogs had equaled those of the most profitable third of the farms with hog enterprises.

The hogs on the profitable farms produced large litters, with an average of 6.6 pigs weaned per litter; they used relatively small amounts of feed--only 357 pounds per 100 pounds gain; they made more than average use of legume pastures; and their owners marketed more than the average number of spring pigs in the fall.

Table 9.--Dairy-Cattle Enterprises^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		155	52	52
Number of cows in herd		15.1	17.2	14.2
Number of cows milked.		13.2	15.0	12.1
Total animal units in herd		20.5	21.7	20.5
Percent of cattle units milked		64.4	69.1	59.0
Total feed to cattle	\$	\$ 1 228	\$ 1 249	\$ 1 335
Total returns from cattle.		2 602	3 326	2 161
Total returns at average rate.		2 602	2 648	2 830
Cattle efficiency index ^{b/}		100	126	76
Returns per \$100 feed.	\$	\$ 212	\$ 266	\$ 162
Total pounds of beef produced.		6 372	6 831	6 137
Total pounds of milk produced.		105 011	123 327	93 355
Pounds of beef per cow in herd		422	397	432
Pounds of milk per cow in herd		6 954	7 170	6 574
Pounds of milk per cow milked.		7 955	8 222	7 715
Price paid per 100 lb. cattle bought	\$	\$ 12.12	\$ 12.58	\$ 13.08
Price received per 100 lb. cattle sold		8.74	9.14	8.92
Returns per 100 lb. milk produced.		1.90	2.13	1.73
Feed charge per 100 lb. beef ^{c/}		7.28	6.52	8.63
Returns per 100 lb. beef ^{c/}		15.42	17.35	13.97
<u>Percent of feed value that was:</u>				
Grain.		37.0	35.6	39.0
Protein supplement		9.8	11.6	9.7
Salt and minerals.		.9	1.2	.7
Total concentrates		47.7	48.4	49.4
Hay.		24.4	25.3	22.9
Silage		10.1	7.9	10.9
Pasture.		17.8	18.4	16.8
Total roughages.		52.3	51.6	50.6

^{a/} Only farms which had five or more animal units in cattle and whose operators kept complete feed and production records were used in these comparisons.

^{b/} See footnote b of Table 10.

^{c/} See footnote c of Table 10.

Dairy Cattle. The dairy farmers' response to the call of the defense program for increased production was shown by a 10 percent increase in the amount of milk produced on cooperators' farms in 1941 over that produced in 1940. The average dairy production for 155 farms was 105,011 pounds per farm in 1941 and only 95,222 pounds per farm on the same number of farms (mostly the same farms) in 1940. This increase was evidently due to an increase of one cow per farm and to an increase of 276 pounds of milk per cow.

More protein concentrates, legume hay, and pasture and less grain and silage were fed to the one-third most profitable dairy herds than to the one-third least profitable herds.

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Table 10.--Feeder-Cattle Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		108	35	36
Number of cows in herd		2.9	3.1	2.6
Number of cows milked.		2.1	2.1	2.0
Total animal units in herd		53.7	39.0	70.9
Percent of cattle units milked		3.9	5.4	2.8
Total feed to cattle	\$	\$ 4 660	\$ 2 684	\$ 7 007
Total returns from cattle.		5 773	4 194	7 575
Total returns at average rate.		5 773	3 328	8 689
Cattle efficiency index ^{b/}		100	126	87
Returns per \$100 feed.	\$	\$ 124	\$ 156	\$ 108
Total pounds of beef produced.		40 987	28 764	54 218
Total pounds of milk produced.		14 133	13 802	13 648
Price paid per 100 lb. cattle bought	\$	\$ 11.18	\$ 10.79	\$ 11.28
Price received per 100 lb. cattle sold		11.17	11.11	11.08
Feed charge per 100 lb. beef ^{c/}		10.99	8.90	12.61
Returns per 100 lb. beef ^{c/}		13.62	13.91	13.62
<u>Percent of feed value that was:</u>				
Grain.		71.7	69.8	71.8
Protein supplement		11.0	8.7	12.4
Salt and minerals.		.5	.7	.4
Total concentrates		83.2	79.2	84.6
Hay.		8.6	10.6	7.7
Silage		4.2	3.0	4.9
Pasture.		4.0	7.2	2.8
Total roughages.		16.8	20.8	15.4

a/ Only farms that produced 5,000 pounds or more of beef from purchased feeder cattle were used in these comparisons.

b/ The cattle efficiency index is the percent that the returns from feed fed to the cattle on a farm is of the average returns from the same amount of feed fed to the same kind of cattle on all farms.

c/ This is the feed charge or returns from 100 pounds of live weight of animal or 1,000 pounds of milk. Approximately the same amount of feed is required to produce either 100 pounds of beef or 1,000 pounds of milk.

Feeder Cattle. The average returns of \$124 for each \$100 worth of feed fed to feeder cattle on 108 farms was approximately the amount needed to pay for the feed, labor, use of equipment, and other costs. Feeder cattle gains appeared to be more dependent upon the low feed costs per 100 pounds gain than upon the quality of cattle fed or the spread between the buying and selling prices. Compared with the 35 least profitable herds, the 35 most profitable ones had \$3.71 less feed charges per 100 pounds, but had only a few cents more spread.

Table 11.--Beef-Cow Herd Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		43	14	14
Number of cows in herd		18.3	15.1	20.0
Number of cows milked.		2.4	2.9	1.9
Total animal units in herd		27.5	22.3	31.2
Percent of cattle units milked		8.7	13.0	6.1
Total feed to cattle	\$	\$ 1 229	\$ 831	\$ 1 445
Total returns from cattle.		1 667	1 603	1 408
Total returns at average rate.		1 667	1 130	1 965
Cattle efficiency index ^{b/}		100	142	72
Returns per \$100 feed.	\$	\$ 136	\$ 193	\$ 97
Total pounds of beef produced.		13 587	12 495	13 998
Total pounds of milk produced.		15 746	16 849	11 952
Pounds of beef per cow in herd		742	827	700
Pounds of milk per cow in herd		860	1 116	598
Pounds of milk per cow milked.		6 561	5 810	6 291
Price paid per 100 lb. cattle bought	\$	\$ 13.42	\$ 11.46	\$ 16.15
Price received per 100 lb. cattle sold		10.27	9.37	9.91
Returns per 100 lb. milk produced.		1.61	1.82	1.61
Feed charge per 100 lb. beef ^{c/}		8.11	5.86	9.51
Returns per 100 lb. beef ^{c/}		10.99	11.32	9.27
<u>Percent of feed value that was:</u>				
Grain.		41.6	32.8	41.2
Protein supplement		2.8	2.8	2.1
Salt and minerals.		.5	.6	.5
Total concentrates		44.9	36.2	43.8
Hay.		23.6	29.3	21.0
Silage		2.4	.2	5.5
Pasture.		29.1	34.3	29.7
Total roughages.		55.1	63.8	56.2

^{a/} Only farms having five or more animal units in cattle and whose operators kept complete feed and production records were used in these comparisons.

^{b/} See footnote b of Table 10.

^{c/} See footnote c of Table 10.

Beef-Cow Herds. Most beef-cow herds paid well for their feed in 1941. The most profitable third of this kind of cattle paid \$193 for each \$100 worth of feed fed, while the least profitable third paid only \$97 for \$100 worth of feed. The difference was evidently due, at least in part, to the larger production of 127 pounds of beef per cow and to the lower feed cost of \$3.65 per 100 pounds for the more profitable herds. The profitable herds were fed less grain and silage and more hay and pasture than the unprofitable herds.

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Table 12.--Dual-Purpose Cattle Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		17	6	6
Number of cows in herd		12.4	12.0	13.3
Number of cows milked.		6.8	7.0	5.8
Total animal units in herd		21.1	18.4	27.7
Percent of cattle units milked		32.2	38.0	20.9
Total feed to cattle	\$	\$ 1 035	\$ 815	\$ 1 448
Total returns from cattle.		1 675	1 806	1 790
Total returns at average rate.		1 675	1 320	2 346
Cattle efficiency index ^{b/}		100	137	76
Returns per \$100 feed.	\$	\$ 162	\$ 222	\$ 124
Total pounds of beef produced.		10 708	10 608	12 752
Total pounds of milk produced.		37 484	38 198	28 396
Pounds of beef per cow in herd		864	884	959
Pounds of milk per cow in herd		3 023	3 183	2 135
Pounds of milk per cow milked.		5 512	5 457	4 896
Price paid per 100 lb. cattle bought	\$	\$ 11.53	\$ 8.08	\$ 15.42
Price received per 100 lb. cattle sold		9.73	9.77	10.17
Returns per 100 lb. milk produced.		1.70	1.89	1.86
Feed charge per 100 lb. beef ^{c/}		7.16	5.65	9.28
Returns per 100 lb. beef ^{c/}		11.59	12.51	11.48
<u>Percent of feed value that was:</u>				
Grain.		45.0	38.0	51.0
Protein supplement		4.6	4.6	3.7
Salt and minerals.		.4	.5	.4
Total concentrates		50.0	43.1	55.1
Hay.		25.8	26.6	24.3
Silage		1.2	3.7	.5
Pasture.		23.0	26.6	20.1
Total roughages.		50.0	56.9	44.9

a/ Only farms having five or more animal units in cattle and whose operators kept complete feed and production records were used in these comparisons.

b/ See footnote b of Table 10.

c/ See footnote c of Table 10.

Dual-Purpose Cattle. The 17 herds of dual-purpose cattle repaid their owners well in 1941. The six most profitable herds produced beef and milk at a very low feed cost. They were fed much less grain and more hay and pasture than were the six least profitable herds. Dual-purpose cattle produced both beef and milk at a lower feed cost than did any other class of cattle. (See Tables 9 to 12.) While Farm Bureau Farm Management Service records have revealed this advantage repeatedly from year to year, they have also shown that the price received for the beef sold from dual-purpose herds is always low compared with the price received for beef from good beef-cow herds and from purchased feeder cattle.

Table 13.--Sheep Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
<u>Native flocks of sheep</u>				
Number of flocks		71	24	24
Total feed to sheep.	\$ _____	\$ 336	\$ 264	\$ 385
Total returns from sheep	_____	538	591	426
Total returns at average rate.	_____	538	422	616
Sheep efficiency index	_____	100	140	69
Returns per \$100 feed.	\$ _____	\$ 160	\$ 224	\$ 111
Pounds of mutton and wool produced	_____	4 168	4 276	3 819
Returns per 100 lb. produced	\$ _____	\$ 12.91	\$ 13.82	\$ 11.15
Feed charge per 100 lb. produced	_____	8.06	6.17	10.08
Price per 100 lb. sold	_____	12.52	12.47	11.44
<u>Percent of feed value that was:</u>				
Grain.	_____	22.2	18.2	22.2
Protein supplement	_____	1.0	1.8	.7
Salt and minerals.	_____	1.3	.6	1.6
Total concentrates	_____	24.5	20.6	24.5
Hay.	_____	23.7	22.7	23.3
Silage	_____	1.2	.9	1.8
Pasture.	_____	50.6	55.8	50.4
Total roughages.	_____	75.5	79.4	75.5
<u>Feeder lambs bought</u>				
Number of flocks		30	10	10
Total feed to sheep.	\$ _____	\$ 1 094	\$ 1 048	\$ 1 216
Total returns from sheep	_____	1 335	1 784	925
Total returns at average rate.	_____	1 335	1 279	1 484
Sheep efficiency index	_____	100	139	62
Returns per \$100 feed.	\$ _____	\$ 122	\$ 170	\$ 76
Pounds of mutton and wool produced	_____	10 322	11 573	9 089
Returns per 100 lb. produced	\$ _____	\$ 12.93	\$ 15.41	\$ 10.18
Feed charge per 100 lb. produced	_____	10.60	9.05	13.38
Price per 100 lb. bought	_____	10.40	10.09	10.48
Price per 100 lb. sold	_____	10.51	10.78	9.97
<u>Percent of feed value that was:</u>				
Grain.	_____	65.8	66.8	68.7
Protein supplement	_____	1.8	2.8	1.5
Salt and minerals.	_____	2.3	1.2	3.2
Total concentrates	_____	69.9	70.8	73.4
Hay.	_____	17.9	19.8	15.2
Silage	_____	.6	.0	.7
Pasture.	_____	11.6	9.4	10.7
Total roughages.	_____	30.1	29.2	26.6

^{a/} Farms were divided into groups according to the returns per \$100 feed fed to sheep. Only farms having three or more animal units in sheep were used in this comparison.

Sheep. Most of the native flocks of sheep paid well for their feed at the prices charged, especially since more than 75 percent of their feed consisted of hay and pasture which have little or no market value. The most profitable flocks were fed less grain and more hay and pasture than the least profitable flocks.

Feeder sheep, like feeder cattle, brought only about enough average returns to pay for their feed, labor, and other costs of production. A few droves did very well, while others lost money.

Table 14.--Poultry Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms		254	84	85
Total feed to poultry	\$ _____	\$ 337	\$ 323	\$ 326
Total returns from poultry.	_____	680	836	484
Total returns at average rate	_____	680	652	659
Poultry efficiency index--% of average.	_____	100	128	73
Returns per \$100 feed	\$ _____	\$ 202	\$ 259	\$ 148
Average number of hens kept	_____	162	175	142
Average number of eggs produced per hen	_____	143	155	130
Total returns per hen	\$ _____	\$4.19	\$4.78	\$3.40
Average price of eggs per dozen	_____	.25	.26	.23
Percent of eggs laid in Oct., Nov., Dec.	_____	26.8	30.5	23.2
Feed charge per 100 lb. feed.	\$ _____	\$1.55	\$1.53	\$1.57

^{a/} Farms were divided into groups according to the returns per \$100 feed fed to poultry. Only flocks having 50 or more hens were used in this comparison.

Poultry. Responding to the demands of the defense program and to the better price of eggs, Farm Bureau Farm Management Service cooperators stepped up their 1941 egg production by 18 percent over that of 1940. Their poultry was increased 14 hens per flock, and the flocks increased egg production seven eggs per hen for the 254 farms on which complete poultry records were kept. Compared with the one-third least profitable flocks, the one-third most profitable flocks, produced 25 more eggs per hen, received 3 cents per dozen more for eggs, produced more eggs during the fall and winter, and were fed less expensive rations.

Labor and Horse and Machinery Costs

Labor Costs. The average labor costs of \$1,202 per farm on the 120 farms with the highest earnings constituted only 88 percent of the \$1,360 average labor costs on all the farms requiring the same amount of work on crops and livestock. On the other hand, labor costs were \$190 (14 percent) higher on the 120 least profitable farms than on all the farms with similar labor requirements.

Maximum wartime farm production during a time of acute labor shortage calls for the most effective use of all available labor. That the effective use of labor also brings the most profit to the farmer is evidenced by the fact that the gross earnings per man on the 120 most profitable farms were 18 percent higher than the average gross earnings for all farms. Similar returns for the 120 least profitable farms were 20 percent less than the average. Most of this advantage of the most profitable group of farms was due to higher crop yields and higher livestock returns for feed fed. (Table 4.)

The standard days of man labor required for the production of crops and livestock, as shown in Table 15, are based on many years of complete cost studies conducted by the Department of Agricultural Economics. Estimates for uncommon crops were made by applying the same figure used for similar common crops. These standard requirements were applied to the acres of crops and the amounts of livestock on each farm in order to calculate the total days of productive labor for the farm.

Table 15.--Standards for Calculating Days of Productive Labor
on Crops and Productive Livestock

Kind of crop or livestock	Days of labor required
Corn	.82 per acre
Oats (threshed basis)	.65 per acre
Winter wheat (combined basis)	.37 per acre
Spring wheat (threshed)	.65 per acre
Barley (threshed)	.65 per acre
Soybeans for grain (combined)	.41 per acre
Alfalfa	1.25 per acre
Clover or mixed hay	.79 per acre
Timothy	.79 per acre
Soybean hay	1.46 per acre
Cattle other than cows milked	2.10 per animal unit ^{a/}
Cows milked	12.00 per cow
Hogs	.30 per 100 pounds
Sheep	3.67 per animal unit ^{a/}
Hens	29.30 per 100 hens

^{a/} An animal unit consists of one mature cow, two heifer calves or yearlings, 1,000 pounds liveweight of feeder cattle, 5 to 6 ewes, and 10 to 20 lambs.

Table 16.--Labor and Horse and Machinery Costs

Item	Your farm	All 600 farms	120 most profitable farms	120 least profitable farms
<u>Days of productive work</u>				
On crops	_____	144.9	121.3	155.1
On livestock	_____	295.6	329.9	278.6
Total days of productive work. . .	_____	440.5	451.2	433.7
<u>Labor</u>				
Gross earnings per man (1)	\$ _____	\$6 059	\$7 150	\$4 823
Average earnings of all farms (2). .	_____	6 059	6 059	6 059
Percent of average [% (1) is of (2)]	_____	100	118	80
Average number of men for 12 months.	_____	1.93	1.69	2.12
Days of productive work per man. . .	_____	228.2	267.0	204.6
Labor charge per month of labor. . .	\$ _____	\$60.17	\$59.21	\$61.76
Total labor cost	_____	1 396	1 202	1 575
Labor cost at normal rate.	_____	1 396	1 360	1 385
Percent of normal labor cost	_____	100	88	114
<u>Horses and machinery</u>				
Average number of work horses. . . .	_____	2.6	2.2	2.8
Percent of farms with tractors . . .	_____	98.8	99.2	97.5
Percent of farms with trucks	_____	59.0	58.3	60.0
Feed cost per workable horse	\$ _____	\$ 48	\$ 45	\$ 50
Total horse and machinery cost . . .	_____	1 191	981	1 378
Total cost at normal rate.	_____	1 191	1 120	1 215
Percent of normal horse and mach.cost	_____	100	88	113
<u>Expenses and net decreases</u>				
Auto--only farm share.	\$ _____	\$ 146	\$ 129	\$ 167
Truck--only farms with trucks. . . .	_____	145	112	166
Tractor--only farms with tractors. .	_____	330	248	400
Other machinery--all farms	_____	483	419	564
Income from use of machinery ^{a/}	\$ _____	\$ 98	\$ 84	\$ 104

^{a/} This figure includes the automobile.

Horse and machinery costs. Low power and machinery costs for the amount of work done increased the net farm earnings on many farms. The average cost of \$981 per farm on the 120 most profitable farms was \$139 (12 percent) less than the average cost on farms having about the same amount of work on crops and livestock. The cost on the 120 least profitable farms was \$163 (13 percent) more than the average of similar farms.

Anyone who finds his power and machinery costs particularly high may locate the source of such high costs in his auto, truck, tractor, or other machinery accounts by comparing his record with that of the average of farms similar to his. In making such a comparison, the size of farm and the amount of tillable land need to be considered.

Influence of Price on Farm Earnings

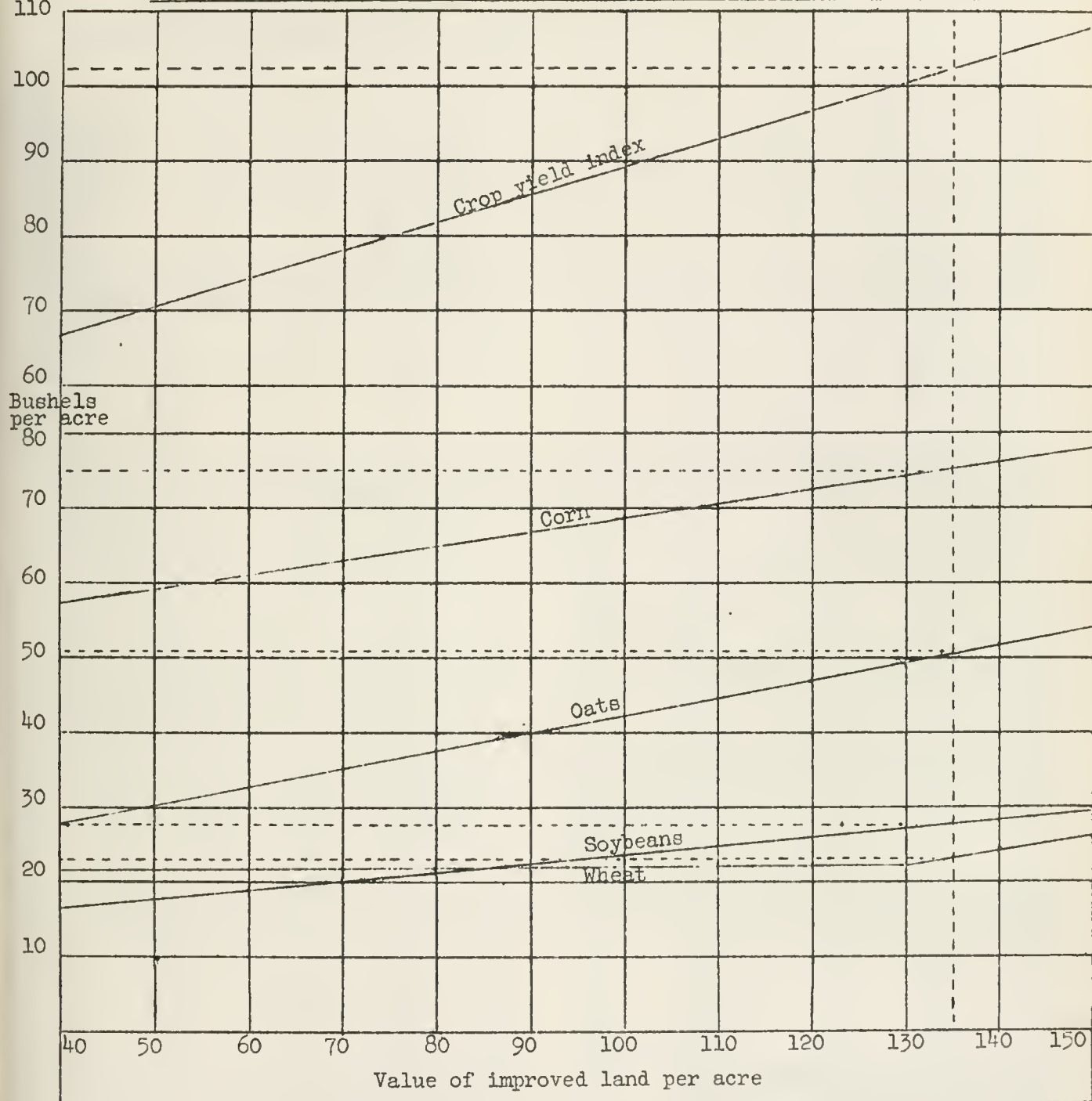
Price of products sold is of course one of the important factors that affect farm earnings. However, it is not as important as other factors in causing the great differences in earnings on farms of the same type during any one year or period of years. In individual cases a specially good or poor price for the major products sold may be a very influential factor in determining the net farm income. Usually, however, each cooperator will find that production costs are much more effective in making incomes high or low than are the prices of products sold. If his prices are consistently low from year to year, each cooperator may well study the reasons for such low prices. The amounts and prices of most of the products sold from Farm Bureau Farm Management Service farms during 1941 are shown in Table 17.

Table 17.--Amounts and Prices of Some Products Sold

Item	Your farm	All 600 farms	120 most profitable farms	120 least profitable farms
<u>Amounts of products sold</u>				
Corn - bushels	_____	2 404	1 821	1 882
Oats - bushels	_____	912	608	963
Wheat - bushels	_____	172	118	137
Soybeans - bushels	_____	471	541	331
Beef - pounds	_____	37 457	22 979	50 223
Pork - pounds	_____	35 957	52 242	26 174
Mutton and wool - pounds	_____	4 088	2 463	5 364
Milk - pounds produced	_____	47 546	44 323	42 519
Eggs - dozens	_____	1 105	1 180	1 002
<u>Prices received</u>				
Corn - per bushel	\$ _____	\$.66	\$.66	\$.63
Oats - per bushel	_____	.36	.38	.36
Wheat - per bushel	_____	.88	.92	.85
Soybeans - per bushel	_____	1.23	1.22	1.22
Beef - per 100 pounds	_____	10.81	10.97	10.81
Pork - per 100 pounds	_____	9.18	9.35	8.98
Mutton and wool - per 100 pounds	_____	10.69	11.00	10.53
Milk - per 100 pounds	_____	1.86	1.79	1.87
Eggs - per dozen	_____	.24	.25	.23

Crop
yield
index
110

The Crop-Yield Index and Yields (bushels per acre) of Corn, Oats, Wheat,
and Soybeans, as They Vary With the Value Per Acre of Improved Land^{a/}



^{a/} The average yields of corn, oats, wheat, and soybeans, and the average crop-yield index for farms having any given value of improved land per acre can be found by using this chart in the following manner: Locate on the bottom line the acre value of the improved land; with a sharp-pointed pencil, draw a perpendicular line from the point on the bottom line that indicates the acre value of the improved land to the top of the chart; from the points where the perpendicular line crosses the lines for the different crops and the crop-yield index, draw horizontal lines across the chart until they cross the left-hand side of the chart; and, finally, read the average yields and the crop-yield index from the scale on the left-hand side of the chart. The average yields of farms on which the improved land is valued at \$135 per acre are located on the chart. They are: corn, 75 bushels; oats, 51 bushels; wheat, 23 bushels; soybeans, 28 bushels; and the crop-yield index, 102.

Table 18.--County Averages of Factors Helping to Analyze the Farm Business

Item	Northern Illinois counties			
	Bureau	DeKalb	Grundy	Kendall
Number of farms.	23	40	18	20
Acres in farm.	241.1	244.6	266.4	272.3
Value of land per acre	\$125.07	\$127.83	\$110.98	\$117.85
Total investments per acre	212.81	226.62	167.16	208.28
Rate earned on investment.	16.37	15.90	17.77	13.73
Gross earnings per acre.	\$ 53.78	\$ 55.28	\$ 41.73	\$ 51.12
Gross expenses per acre.	18.94	19.25	12.03	22.52
Net earnings per acre.	34.84	36.03	29.70	28.60
Gross earnings per man	6 460	6 590	6 101	6 447
Cash receipts--total	\$15 167	\$17 572	\$ 9 564	\$17 473
Livestock except dairy and poultry	11 049	12 446	3 020	12 606
Dairy products	613	1 088	1 134	991
Poultry and eggs	612	503	394	618
Feed, grain, and supplies.	1 675	2 263	3 939	1 823
Machinery and equipment.	494	544	342	790
Labor off farm and miscellaneous	137	123	60	125
Soil conservation payments	587	605	675	520
Cash expenses--total	\$10 598	\$11 851	\$ 4 132	\$14 966
Livestock bought	4 140	5 058	609	6 463
Feeds.	2 435	2 616	648	3 297
Machinery and equipment.	1 796	2 040	1 385	2 711
Farm improvements.	698	544	347	692
Livestock, crop, and other expense	397	499	353	488
Hired labor.	823	719	481	915
Taxes (land and personal).	309	375	309	400
Cash balance for the year.	\$ 4 569	\$ 5 721	\$ 5 432	\$ 2 507
Inventory changes.	4 174	3 560	2 988	5 764
Farm products used in household.	342	322	280	276
Receipts less expenses on inventory basis.	9 085	9 603	8 700	8 547
Crop yields: Corn--bushels per acre	84.5	79.6	74.2	65.8
Oats--bushels per acre	46.6	57.9	55.1	53.4
Wheat--bushels per acre.	19.7	24.1	23.0	28.4
Soybeans for grain--bu.per acre	30.7	25.5	23.5	22.6
Crop-yield index	105	110	105	99
Feed per acre to productive livestock.	\$ 26.31	\$ 27.68	\$ 9.15	\$ 28.15
Returns per \$100 feed: Cattle	133	135	189	124
Hogs	198	198	194	195
Sheep.	119	105	208	86
Poultry.	192	188	186	192
All livestock.	163	159	191	150
All-livestock efficiency index	98	99	104	95
Percent of land area tillable.	86.9	91.1	87.4	88.2
Percent of tillable land in: Corn	35.7	33.7	36.6	33.5
Oats	20.6	21.3	20.6	24.5
Wheat.	.6	1.7	.7	2.6
Soybeans for grain	3.3	4.3	15.3	4.7
All hay and pasture crops.	34.3	29.4	20.9	25.8
Other crops.	5.5	9.6	5.9	8.9
Biennial and perennial legumes	27.0	27.2	20.9	22.6
Months of man labor.	24.1	24.6	21.9	25.9
Labor cost per crop acre	\$ 8.97	\$ 7.94	\$ 6.10	\$ 7.80
Horse and machinery cost per crop acre	6.87	6.46	5.18	6.26
Improvements cost per acre	1.93	2.28	1.26	2.15
Limestone and phosphate cost per acre.	.27	.48	.34	.42
Taxes per acre (land and personal)	1.28	1.53	1.16	1.47

Table 18.--County Averages of Factors Helping to Analyze the Farm Business (Cont.)

Northern Illinois counties			Western Illinois counties					
LaSalle	Lee	Mar. Put.	Fulton	Henderson	Henry	Knox	McDonough	Mercer
51	36	29	7	7	30	21	21	8
278.8	273.5	310.3	353.8	227.3	241.0	310.2	279.2	297.2
\$128.66	\$117.28	\$116.14	\$ 84.50	\$ 69.21	\$100.57	\$106.56	\$100.57	\$ 81.20
205.57	187.44	180.47	133.97	126.09	175.19	171.33	164.42	152.30
15.18	14.51	16.48	16.90	16.29	14.47	17.32	19.63	17.66
\$ 45.60	\$ 42.13	\$ 46.22	\$ 35.33	\$ 34.08	\$ 43.34	\$ 43.50	\$ 48.65	\$ 45.37
14.39	14.94	16.47	12.69	13.54	17.99	13.83	16.37	18.48
31.21	27.19	29.75	22.64	20.54	25.35	29.67	32.28	26.89
6 316	6 116	6 968	6 345	4 798	5 170	6 284	6 290	6 786
\$13 279	\$13 024	\$16 008	\$13 305	\$10 002	\$12 116	\$13 148	\$15 344	\$17 735
7 582	8 308	11 341	8 825	8 301	9 366	6 371	11 081	12 371
961	904	584	630	99	534	763	283	657
404	332	212	322	99	363	170	399	261
3 111	2 330	2 400	2 229	624	884	4 380	2 402	2 836
417	386	564	360	299	274	522	449	623
131	116	117	127	99	79	128	114	313
673	648	790	812	481	616	814	616	674
\$ 7 826	\$ 8 366	\$10 518	\$ 7 413	\$ 6 454	\$ 8 893	\$ 6 743	\$ 9 307	\$12 654
2 317	2 754	2 703	1 957	2 622	3 550	1 221	2 444	4 776
1 370	1 875	3 138	1 704	1 252	1 991	1 018	2 910	2 915
1 854	1 679	2 462	1 526	1 219	1 335	2 169	1 793	2 408
651	603	566	518	209	567	585	568	877
441	409	413	397	349	303	443	413	467
785	672	761	741	522	766	807	782	748
408	374	475	570	281	381	500	397	463
\$ 5 453	\$ 4 658	\$ 5 490	\$ 5 892	\$ 3 548	\$ 3 223	\$ 6 405	\$ 6 037	\$ 5 081
3 692	3 226	4 193	2 520	1 491	3 281	3 286	3 428	3 379
310	265	270	335	290	329	331	375	366
9 455	8 149	9 953	8 747	5 329	6 833	10 022	9 840	8 826
74.6	68.4	73.4	59.5	63.0	72.2	74.9	69.0	72.0
53.1	54.1	50.2	39.8	38.5	34.7	34.7	48.1	36.3
26.4	17.1	22.3	18.3	25.6	20.9	12.6	24.0	--
22.5	24.1	27.4	24.3	16.1	23.3	28.3	25.9	24.7
100	101	98	92	99	94	99	102	104
\$ 16.29	\$ 19.20	\$ 21.71	\$ 14.51	\$ 17.23	\$ 22.07	\$ 14.31	\$ 23.26	\$ 22.99
155	135	140	152	120	151	162	144	149
198	186	192	213	204	185	201	198	199
136	161	110	177	130	144	128	143	104
211	203	197	195	211	176	212	189	202
173	156	166	187	169	169	183	178	167
104	97	98	109	100	100	104	103	106
87.7	87.2	79.0	74.0	74.5	79.1	83.6	82.7	71.0
37.2	33.5	33.3	30.2	35.8	32.0	31.9	32.8	36.6
22.7	21.8	19.5	15.8	18.6	19.0	14.6	14.2	11.4
1.8	.8	4.7	11.4	3.7	1.5	1.6	5.6	0
4.4	6.3	7.8	9.7	4.8	2.9	18.7	13.8	2.6
28.3	30.5	29.3	29.6	28.8	40.8	27.7	26.2	44.0
5.6	7.1	5.4	3.3	8.3	3.8	5.5	7.4	5.4
25.0	27.5	25.7	27.7	27.6	31.5	22.4	22.5	31.0
24.2	22.6	24.7	23.6	19.4	24.2	25.8	25.9	23.9
\$ 7.40	\$ 6.98	\$ 7.19	\$ 7.07	\$ 8.99	\$ 10.19	\$ 7.19	\$ 8.33	\$ 10.22
5.84	5.79	6.64	6.40	6.97	7.61	5.95	6.63	8.96
1.85	1.76	1.77	1.70	1.01	1.87	1.67	1.77	1.86
.33	.36	.44	.27	.24	.28	.26	.30	.25
1.46	1.37	1.53	1.61	1.24	1.58	1.61	1.42	1.56

Table 18.--County Averages of Factors Helping to Analyze the Farm Business (Cont.)

Item	Western Illinois counties (Cont.)			
	Peoria	Rock Is.	Stark	Warren
Number of farms.	23	13	13	13
Acres in farm.	215.7	209.8	253.0	301.6
Value of land per acre	\$ 99.94	\$ 74.50	\$116.83	\$108.44
Total investments per acre	161.98	145.53	180.88	172.86
Rate earned on investment.	18.14	19.40	18.95	15.52
Gross earnings per acre.	\$ 43.88	\$ 45.16	\$ 47.86	\$ 40.50
Gross expenses per acre.	14.50	16.92	13.59	13.68
Net earnings per acre.	29.38	28.24	34.27	26.82
Gross earnings per man	5 701	5 947	6 677	5 521
Cash receipts--total	\$ 9 892	\$ 9 084	\$12 200	\$13 298
Livestock except dairy and poultry	5 986	5 306	7 365	7 813
Dairy products	556	1 013	486	536
Poultry and eggs	346	689	334	285
Feed, grain, and supplies.	2 009	1 077	2 806	3 227
Machinery and equipment.	294	364	399	397
Labor off farm and miscellaneous	127	74	130	154
Soil conservation payments	574	561	680	886
Cash expenses--total	\$ 5 514	\$ 4 172	\$ 7 604	\$ 7 499
Livestock bought	1 160	547	2 958	1 866
Feeds.	1 403	1 048	1 267	1 274
Machinery and equipment.	1 316	1 305	1 666	2 034
Farm improvements.	491	351	369	701
Livestock, crop, and other expense	266	299	299	431
Hired labor.	593	270	671	835
Taxes (land and personal).	285	352	374	358
Cash balance for the year.	\$ 4 378	\$ 4 912	\$ 4 596	\$ 5 799
Inventory changes.	2 288	1 454	4 449	2 698
Farm products used in household.	290	342	343	319
Receipts less expenses on inventory basis.	6 956	6 708	9 388	8 816
Crop yields: Corn--bushels per acre	74.2	64.4	77.1	68.4
Oats--bushels per acre	41.1	33.6	42.2	43.9
Wheat--bushels per acre.	26.3	--	25.1	10.0
Soybeans for grain--bu.per acre	30.7	14.8	33.0	23.1
Crop-yield index	103	98	103	95
Feed per acre to productive livestock.	\$ 16.96	\$ 19.12	\$ 17.46	\$ 16.85
Returns per \$100 feed: Cattle	152	177	182	142
Hogs	203	202	200	182
Sheep.	150	131	122	57
Poultry.	201	215	221	177
All livestock.	182	193	185	162
All-livestock efficiency index	103	105	105	95
Percent of land area tillable.	82.2	83.4	86.8	87.3
Percent of tillable land in: Corn	31.7	32.8	38.7	36.9
Oats	19.3	16.8	20.0	17.7
Wheat.	2.6	.4	.5	.3
Soybeans for grain	7.2	.6	6.0	6.8
All hay and pasture crops.	33.4	43.2	29.2	34.4
Other crops.	5.8	6.2	5.6	3.9
Biennial and perennial legumes	26.4	38.1	25.1	29.3
Months of man labor.	19.9	19.1	21.8	26.6
Labor cost per crop acre	\$ 8.44	\$ 8.37	\$ 7.54	\$ 7.29
Horse and machinery cost per crop acre	6.77	7.52	6.60	7.11
Improvements cost per acre	1.50	2.07	1.23	1.79
Limestone and phosphate cost per acre.	.22	.24	.15	.46
Taxes per acre (land and personal)	1.32	1.68	1.48	1.19

Table 18.--County Averages of Factors Helping to Analyze the Farm Business (Cont.)

Central Illinois counties					Average North	Average West	Average Central	Average All co's
Ford	Livingston	McLean	Tazewell	Woodford				
8	53	55	60	51	217	156	227	600
304.6	237.5	305.8	242.8	255.8	270.2	262.5	261.8	265.0
\$115.98	\$133.28	\$136.13	\$120.79	\$134.14	\$121.90	\$ 98.46	\$130.50	\$119.09
181.47	198.85	205.06	185.97	203.12	199.98	163.96	197.68	189.87
16.57	14.72	15.83	16.10	14.22	15.55	17.27	15.33	15.84
\$ 45.24	\$ 42.72	\$ 47.35	\$ 45.16	\$ 44.01	\$ 47.70	\$ 43.68	\$ 45.01	\$ 44.12
15.16	13.46	14.89	15.22	15.12	16.61	15.37	14.73	14.04
30.08	29.26	32.46	29.94	28.89	31.09	28.31	30.28	30.08
6 492	6 063	6 885	6 106	5 880	6 438	5 898	6 272	6 059
\$13 671	\$ 9 061	\$15 988	\$11 396	\$12 241	\$14 671	\$12 461	\$12 233	\$13 174
5 438	3 057	8 761	5 244	6 419	9 554	8 142	5 856	7 787
728	582	709	917	538	905	562	697	737
781	733	307	394	398	426	339	466	418
5 413	3 615	4 770	3 604	3 726	2 528	2 245	3 980	3 004
361	335	542	428	321	490	386	408	432
119	101	105	128	116	119	122	113	118
831	638	794	681	723	649	665	713	678
\$ 8 448	\$ 4 879	\$ 9 644	\$ 6 673	\$ 7 553	\$ 9 663	\$ 7 561	\$ 7 234	\$ 8 197
2 534	1 119	3 211	1 915	2 562	3 380	2 245	2 210	2 642
1 849	748	1 781	1 251	1 613	2 150	1 700	1 364	1 736
1 676	1 452	2 138	1 614	1 473	1 974	1 648	1 674	1 775
555	423	635	487	408	596	533	492	540
502	325	471	416	341	435	355	395	399
858	450	883	592	638	742	692	649	694
474	362	525	398	518	386	388	450	411
\$ 5 223	\$ 4 182	\$ 6 344	\$ 4 723	\$ 4 688	\$ 5 008	\$ 4 900	\$ 4 999	\$ 4 977
4 369	3 180	3 948	2 926	3 132	3 841	2 942	3 330	3 414
277	326	288	329	299	298	332	310	311
9 869	7 688	10 580	7 978	8 119	9 147	8 174	8 639	8 702
74.9	71.7	74.5	73.5	74.4	74.4	70.9	73.6	73.3
56.0	56.1	50.0	41.1	45.3	53.3	39.4	49.1	48.8
26.0	25.8	21.2	23.3	20.8	23.9	21.1	22.8	22.6
25.8	24.2	28.6	29.6	27.6	24.7	26.9	28.0	26.8
111	101	98	98	93	102	99	98	100
\$ 13.04	\$ 10.52	\$ 16.99	\$ 14.11	\$ 15.97	\$ 20.98	\$ 18.73	\$ 14.53	\$ 17.99
157	165	137	167	141	140	152	149	145
187	196	184	192	190	195	196	189	194
71	105	181	147	145	124	123	147	135
217	215	212	202	189	197	196	206	200
170	182	160	178	164	163	177	169	168
97	103	97	103	97	99	103	100	100
92.6	92.3	91.5	86.3	89.7	86.8	81.4	90.0	86.6
33.5	36.4	37.0	31.1	33.0	34.9	33.5	34.5	34.4
22.9	25.5	18.9	16.4	23.4	21.7	16.8	20.9	20.2
1.1	1.7	4.3	9.9	1.4	1.9	2.5	4.3	3.0
6.1	6.5	11.6	10.9	5.3	6.0	8.5	8.7	7.7
31.1	27.6	25.9	27.1	30.1	28.7	33.3	27.7	29.3
5.3	2.3	2.3	4.6	6.8	6.8	5.4	3.9	5.4
25.0	24.6	21.2	23.0	26.3	25.5	27.4	23.6	25.3
25.5	20.1	25.2	21.5	23.0	24.0	23.3	22.5	23.2
\$ 6.83	\$ 6.71	\$ 6.48	\$ 7.49	\$ 7.37	\$ 7.46	\$ 8.31	\$ 6.97	\$ 7.46
6.56	6.00	6.52	6.58	5.88	6.13	6.89	6.29	6.37
1.51	1.42	1.42	1.61	1.45	1.88	1.69	1.48	1.68
.19	.31	.22	.30	.26	.38	.27	.27	.31
1.56	1.53	1.72	1.64	2.03	1.43	1.48	1.72	1.55

Purpose and Organization of the Farm Bureau Farm Management Service

The Farm Bureau Farm Management Service was first organized in Illinois in 1925. The service has proved helpful to cooperating farmers in many ways. First, it enables each farmer to learn how profitably he has operated his farm as compared with the operation of other farms of the same type. Second, through an annual report it points out clearly to each cooperator those parts of the business that tend to make his farm income high or low. Third, it gives each cooperator the opportunity to learn from the most successful farmers the practices that have led to their success. Fourth, it provides a carefully audited annual record of the farm business that proves helpful in making income tax returns, securing bank credit, adjusting the shares of the tenant's and the landlord's income, settling estates, and adjusting taxes.

Advisory committees, composed of one representative from each Farm Bureau of the cooperating counties and the head of the Department of Agricultural Economics, plan and direct the work. These committees employ fieldmen from among those recommended by the University. They also hold and expend the funds collected from the cooperators.

The fieldmen make five regular contacts with all the cooperators during the year. On these visits they assist the men with their records, study the annual analysis of his business with each cooperator and discuss management problems. The organization and continuation of the project have been made possible by the hearty support of the farm advisers and their assistants. During the past year the fieldmen, farm advisers, and committeemen were as follows:

COUNTY	ADVISER	COMMITTEEMAN
Fieldman: W. A. Herrington		
Livingston	J. L. Stormont	John W. Monroe
McLean	L. G. Rodman	B. C. Kraft
Tazewell	C. F. Bayles	H. L. Peine
Woodford	T. H. Brock	J. F. Felter
Fieldmen: E. G. Fruin ^{a/} and M. P. Gehlbach		
Bureau	P. V. Dean	Robert Jackson
DeKalb	R. P. Johnson ^{b/}	M. C. Bullis
Grundy	M. E. Tascher	E. N. Burnham, Jr.
Kendall	W. P. Miller	Ralph Smith
LaSalle	F. A. Painter	W. F. Whipple
Lee	C. E. Yale	Clarence Hart
Marshall-Putnam	L. J. Hager	C. O. Johnson
Fieldman: B. E. King		
Fulton	J. E. Watt	M. R. Staggs
Henderson	A. J. Rehling	J. N. Rowley
Henry	H. K. Danforth	J. P. Hanna
Knox	A. R. Kemp	Ira Moats
McDonough	R. G. Benbow	C. J. Webb
Mercer	E. D. Peterson ^{c/}	L. J. Schroll
Peoria	I. F. Green	George Shissler
Rock Island	R. C. Smith	H. O. Klawonn
Stark	W. A. Gilbert	Harry F. Morse
Warren	E. W. Walworth	Carl Stewart

^{a/} On leave since July 1, 1941 in the U. S. Army.

^{b/} On leave in the U. S. Army. D. G. McAllister is Acting Farm Adviser.

^{c/} On leave in the U. S. Army. E. M. Edwards is Acting Farm Adviser.

THREE YEARS' REPORT
OF THE FARM BUREAU FARM MANAGEMENT SERVICE
ON 200 FARMS IN

NORTHERN
SUMMARY

ILLINOIS
1939-40-41

A WAR-WINNING FARM PROGRAM

High Crop Yields (Page 33)

40 high-yield farms
Percent of average yields
115

40 low-yield farms

84

High Livestock Returns from Feed (Page 35)

40 high-return farms
Percent of average ~~returns~~ yields
115

40 low-return farms

84

Efficient Use of Available Labor (Page 39)

40 low-cost farms
Percent of average costs
76

40 high-cost farms

135

Efficient Use of Power and Machinery (Page 41)

40 low-cost farms
Percent of average costs
63

40 high-cost farms

135

To Cooperators of the Farm Bureau Farm
Management Service of Northern Illinois:

This report has been prepared for the benefit of all of you who have cooperated in the Service during the three years 1939, 1940, and 1941. I hope that a careful study of its pages will help each of you to realize better how you can work most efficiently in the wartime food production program and how you can profit from your farm operations even more than you have in the past.

The report is divided into two parts: the first part (pages 1 to 16) is of much more importance to all of you than is the second part. By studying this section you can see how your gross farm earnings, net farm earnings, the efficiency of each of the many factors which affect the earnings, and the organization of your farm compare with those of all the 200 farms used in the report, as well as with those of the 40 most profitable farms and the 40 least profitable ones.

The figures by which the many factors of your farm may be compared with figures representing the average factors of the different groups of farms, are written into the "Your Farm" column of Tables 1 to 10, pages 4 to 16. Your fieldman will help to enter your record on the farm efficiency chart on page 9 as he discusses your three years' business with you. This chart, when carefully completed, will enable you to see clearly where your farm stands in regard to net earnings and to each of the factors which affect earnings in comparison with those of all other farms. While it may be a little difficult for some cooperators to understand some of the percentage measures used, please understand that they are a means of measuring your farm efficiencies more accurately than would otherwise be possible. Please study Table 3 with all footnotes on pages 6, 7, and 8, and the farm efficiency chart on page 9 with special care, for they form the most valuable part of the report.

The second part of the report, which begins on page 17, will be of special interest to all of you who wish to study further the relationship of many efficiency and organizational factors to farm earnings and to each other. A careful study of such relationships will enable some of you to understand better why your earnings are high or low and with what factors you need to work in order to make them higher. The tables will provide the details for such a study. The charts will enable you to see more clearly than will the figures alone, just how your farm fits into the picture.

I hope that the report will prove valuable to you and that we may have the pleasure of working with you for another four years.

Very truly yours,

M. L. Mosher

M. L. Mosher, Professor
Farm Management Extension

MLM:CS

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THREE YEARS' REPORT OF THE FARM BUREAU FARM MANAGEMENT SERVICE ON 200 FARMS
IN NORTHERN ILLINOIS FOR 1939, 1940, AND 1941^{1/}

M. L. Mosher, E. G. Fruin, M. P. Gehlbach, and H. C. M. Case^{2/}
Department of Agricultural Economics

Introduction

Maximum production of farm products is a necessary part of the war-winning program in which the United States and the other United Nations are engaged. Maximum production can be reached only when the best yields of crops are produced, the best livestock returns are secured from available feed, and available labor, power, and machinery are used most efficiently.

This report shows that some farmers are much more successful than others in making the best use of land, feed, labor, and equipment (see front cover). The value of the gross earnings per acre on a farm in this area measures fairly well the degree of success with which the land and feed have been used in producing farm products.

Likewise the value of the gross earnings per man measures the degree of the farm operator's success in making the best wartime use of the man power available. That the prices received for products sold affect the gross earnings should be kept in mind whenever gross earnings per acre or per man are used to measure the effective wartime use of land, feed, and labor.

While the maximum production of farm products per acre and per man is of first importance in a war-winning program, maximum net earnings are also important in wartime as well as in peacetime. There is a close relationship between high and low gross earnings and high and low net earnings. This fact is shown by a study of the tables and charts used in this report.

The individual farmer will always profit from a careful study of his farm business. This report will enable each cooperator in the Farm Bureau Farm Management Service of northern Illinois during the three years 1939, 1940, and 1941 to study his business more thoroughly than has been possible from any one year's report. It goes into more detail regarding each of several major factors of farm production that affect both gross earnings and net earnings. It also spreads any unusual or accidental losses or gains, such as those caused by local storms, drouth, or insect damage, over a period of years.

- ^{1/} The 200 farms were located in the following counties: Bureau, DeKalb, Grundy, Kendall, LaSalle, Lee, Marshall, and Putnam. Records were kept for fifteen additional farms in this area during the three years, but they were not used in this report because these farms differed markedly from the other cooperating farms in type of land, size, and organization or operation practices used.
- ^{2/} As Head of the Department of Agricultural Economics, H. C. M. Case gives general supervision to the project, which is under the direct supervision of M. L. Mosher. E. G. Fruin served as fieldman until July 1, 1941, when he went on leave as an officer in the U. S. Army. M. P. Gehlbach has served as fieldman since July 1, 1941.

2.

The many percentage efficiency measures used in this report provide a more accurate method of locating the sources of good or poor earnings than is otherwise possible. Readers who are not accustomed to such percentage measures will need to study the report carefully in order to understand it fully. These measures are explained in footnotes for Table 3, pages 6, 7, and 8.

This report should prove helpful in three ways: First, it will enable each cooperator to learn how profitably he has operated his farm compared with the average operation of all farms in the Service. This comparison will show how much opportunity he has to improve his gross or net earnings.

Second, the report points out clearly those parts of each cooperator's business that tend to make his income high or low. A successful business is built around its strong points as well as away from its weak ones.

Third, the report will enable each cooperator to learn of practices followed by cooperators who have excelled along each line of farm work. Cooperators can obtain additional information of this kind from the fieldman when he discusses the report with them.

Part I

Each cooperator can see in Part I of this report how well his farming compared with that of other cooperators and why his earnings were high or low. He can see, also, why the most successful farmers made high earnings and why the least successful farmers made low earnings.

Investments, Receipts, Expenses, Earnings, Cash Balances, and Inventory Changes

Capital investments. The average total investment on the 200 farms included in this report was \$53,361 (Table 2, page 5). This amount included 274 acres of land valued, without buildings or fences, at an average of \$122 per acre. A slightly higher value per acre for land indicates a somewhat better quality of land on the 40 least profitable farms than on the 40 most profitable farms.

Receipts and net increases. The total annual receipts and net increases, including the value of farm products used in the household, amounted to \$9,323 per farm. Approximately 28 percent of all the income came from hogs; 28 percent, from cattle, excluding dairy products; 18 percent, from feed and grain; 9 percent, from soil conservation payments; 8 percent, from dairy products; 3 percent, from farm products used in the household; 4 percent, from poultry; and 2 percent, from miscellaneous sources.

Expenses and net decreases. The total expenses and net decreases amounted to \$2,932 per farm per year. Including the operator's and family's labor, the total annual operating costs per farm were \$3,643. Of this total, 38 percent was for labor; 23 percent, for machinery and equipment; 10 percent, for taxes; 12 percent, for farm improvements; and 17 percent, for other miscellaneous expenses.

Net earnings on the inventory basis. The average annual net income for investment, risk, and management was \$5,680 per farm, or 10.6 percent of the total investment of \$53,361. The 40 most profitable farms earned average annual incomes

of \$6,483, but the 40 least profitable ones earned incomes of only \$4,302, a difference of \$2,181 per farm. This difference in total net earnings is smaller than usually occurred, because the average size of the 40 most profitable farms was relatively small (Table 2, page 5).

Cash balances. The average balance between cash receipts and cash expenses was \$4,041 per farm per year (Table 1, page 4). The 40 most profitable farms had a cash balance of \$1,549 more per farm per year than the 40 least profitable ones. This cash balance represents the farm's contribution to the money available for family living, payment of debts, interest, life insurance, and investments.

Inventory changes. Inventory values of productive livestock averaged \$775 higher annually at the end of the year than at the beginning, and the values of grain, \$983 higher. Average annual increases in the values of farm improvements of \$167 per farm and of \$162 per farm in the values of farm machinery and equipment indicate a definite increase in repairs and replacements during the three years.

Some Factors That Affect Farm Earnings Related to High- and Low-Earning Farms

The more important factors that affect farm incomes are grouped together in Table 3, pages 6, 7, and 8. Provision is made in the farm efficiency chart on page 9 to show the relationships of most of the factors on any one farm to those factors on the more or less successful farms. The importance of doing reasonably good work with all factors is shown in Chart 2, page 22, and Table 11, page 23. A brief discussion of some of the factors mentioned here will be followed with more complete discussions later in the report.

Gross farm earnings. The annual gross earnings per acre were \$5.20 higher for the 40 most profitable farms and \$7.48 lower for the 40 least profitable farms than the average gross earnings per acre of farms with the same land values. The annual gross earnings per man were \$787 higher on the 40 most profitable farms and \$691 lower on the 40 least profitable farms than the average gross earnings per man of all farms. On farms where most of the income came from the sale of crops, livestock, and livestock products, the gross earnings were affected largely by two factors: crop yields and livestock efficiency.

Crop yields on the 40 most profitable farms were 106 percent of the average yields of all farms with similar soil, while the yields of the 40 least profitable farms were only 91 percent of the average yields. The percentage differences in the grain crops for the two groups of farms were: corn, 106 and 88; oats, 105 and 95; wheat, 103 and 82; and soybeans, 115 and 93.

The efficiency of all productive livestock was 105 percent of average on the 40 most profitable farms and 91 percent of average on the least profitable group. The returns from all the productive livestock were \$337 more on the former and \$592 less on the latter than they would have been if the farmers had received average returns for the same amounts of feed fed to the same classes of livestock. The respective percentages of average returns for feed fed to different classes of livestock on the two groups of farms were: cattle, 105 and 89; hogs, 105 and 94; sheep, 99 and 79; and poultry, 104 and 95.

4.

Costs of farm operations. Labor costs on the high-earning and low-earning groups of farms were 89 percent and 113 percent respectively of the average costs of farms requiring the same amounts of work with crops and livestock. Net power and machinery costs were 81 percent and 106 percent of the average costs of similar farms which received little or no income from custom work. Miscellaneous costs, including farm improvement expenses, crop expenses, livestock expenses, taxes, and miscellaneous expenses, were 90 and 110 percent, respectively, of the average miscellaneous costs on the 40 most profitable and the 40 least profitable farms.

Organization of the farm business. The average size of the 40 most profitable farms was only 228 acres. The average size of the 40 least profitable farms was 304 acres. However, about the same amount of work was done on both groups of farms. This greater intensity of business on the more profitable farms is shown by the 1.93 and 1.46 days of work per acre on crops and livestock on the two groups of farms. This difference in the intensity of business on the two groups is shown also by the \$19.85 and \$14.18 worth of feed fed per acre.

Table 1.--Cash Balances, Inventory Changes, and Tenant-Farm Earnings

Item	Your farm	Average of all 200 farms	40 most profitable farms	40 least profitable farms
<u>Cash balances</u>				
Total cash receipts	\$ _____	\$12 425	\$12 212	\$11 408
Total cash expenses	_____	8 384	7 689	8 434
Cash balance ^{a/}	\$ _____	\$ 4 041	\$ 4 523	\$ 2 974
<u>Inventory changes</u>				
Farm improvements	\$ _____	\$ 167	\$ 164	\$ 233
Horses	_____	-45	-30	-51
All productive livestock	_____	775	988	595
Feed and grain	_____	983	977	768
Machinery and equipment	_____	162	188	144
Automobile	_____	23	41	14
Total inventory changes	\$ _____	\$ 2 065	\$ 2 328	\$ 1 703
<u>Rented farms--number</u>		104	24	18
Size of farm--total acres	_____	265.8	209.6	310.9
<u>Tenant's share</u>				
Capital investment	\$ _____	\$ 8 042	\$ 7 159	\$ 7 765
Returns for labor, capital, and management	_____	3 383	3 850	2 408
Five percent of capital invested	_____	402	358	388
Labor and management earnings	\$ _____	\$ 2 981	\$ 3 492	\$ 2 020
<u>Landlord's share</u>				
Capital investment	\$ _____	\$41 842	\$35 103	\$45 221
Returns for capital investment	_____	2 678	2 794	2 320
Rate earned on investment	_____ %	6.4%	8.0%	5.1%

^{a/} The cash balance as used in this report would be a true cash balance if all the sales and purchases had been for cash. It is really the difference between sales and purchases.

Table 2.--Investments, Receipts, Expenses, and Earnings

Item	Your farm	Average of all 200 farms	40 most profitable farms	40 least profitable farms
<u>Capital investments</u>				
Land.	\$ _____	\$33 347	\$28 506	\$36 258
Farm improvements	_____	7 400	5 440	8 964
Horses.	_____	318	259	369
Productive livestock: Cattle.	_____	3 415	2 715	3 780
Hogs.	_____	942	1 085	879
Sheep	_____	200	141	299
Poultry	_____	115	138	118
Bees.	_____	1	--	4
Total productive livestock.	(_____)	(4 674)	(4 079)	(5 080)
Feed and grain.	_____	4 572	4 234	4 887
Machinery and equipment, ...	_____	2 821	2 369	2 896
Automobile (farm share)	_____	229	212	219
Total capital investments.	\$ _____	\$53 361	\$45 099	\$58 673
<u>Receipts and net increases</u>				
Horses.	\$ _____	\$ --	\$ --	\$ --
Productive livestock: Cattle.	_____	2 604	2 534	2 513
Dairy sales	_____	714	504	434
Hogs.	_____	2 609	3 355	2 203
Sheep	_____	148	126	166
Poultry	_____	122	168	94
Egg sales	_____	207	275	192
Bees.	_____	--	--	--
Total productive livestock.	(_____)	(6 404)	(6 962)	(5 602)
Farm products used in household	_____	285	324	247
Feed and grain.	_____	1 729	1 369	1 579
Labor off farm.	_____	61	66	45
Miscellaneous	_____	20	24	26
Soil conservation payments.	_____	824	722	888
Total receipts and net increases.	\$ _____	\$ 9 323	\$ 9 467	\$ 8 387
<u>Expenses and net decreases</u>				
Farm improvements	\$ _____	\$ 452	\$ 346	\$ 552
Horses.	_____	21	9	28
Productive livestock.	_____	--	--	--
Feed and grain.	_____	--	--	--
Machinery and equipment	_____	851	662	959
Automobile (farm share)	_____	138	117	152
Hired labor	_____	665	476	887
Miscellaneous	_____	68	60	74
Crop expense.	_____	263	215	281
Livestock expense	_____	96	86	118
Taxes	_____	378	321	412
Total expenses and net decreases	\$ _____	\$ 2 932	\$ 2 292	\$ 3 463
<u>Receipts less expenses (farm earnings)</u>				
Family labor.	\$ _____	\$ 6 391	\$ 7 175	\$ 4 924
Returns for labor, capital, mgt.	_____	163	135	127
Operator's labor.	\$ _____	\$ 6 228	\$ 7 040	\$ 4 797
Returns for capital and management.	_____	548	557	495
Rate earned on investment	\$ _____ %	\$ 5 680	\$ 6 483	\$ 4 302
Interest on investment	_____	10.6%	14.4%	7.3%
Labor and management earnings	\$ _____	\$ 2 668	\$ 2 255	\$ 2 934
	_____	3 560	4 785	1 863

6.

Table 3.--Some Factors That Affect Farm Earnings

Item	Your farm	Average of 200 farms	40 most profitable farms	40 least profitable farms
1. Returns for capital and management.	\$ _____	\$ 5 680	\$ 6 483	\$ 4 302
2. Total capital investments	_____	53 361	45 099	58 673
Rate earned (% 1 is of 2) ^{a/}	_____	10.6	14.4	7.3
1. Gross earnings per acre ^{b/}	\$ _____	\$ 34.04	\$ 41.50	\$ 27.57
2. Gross earnings on similar soil ^{c/}	_____	34.04	36.30	35.05
Percent of average (% 1 is of 2)	_____	100	114	79
1. Gross earnings per man ^{b/}	\$ _____	\$ 4 685	\$ 5 472	\$ 3 994
2. Average earnings of all farms	_____	4 685	4 685	4 685
Percent of average (% 1 is of 2)	_____	100	117	85
1. Crop system rating ^{d/}	_____	65.8	66.0	65.9
2. Average crop system rating	_____	65.8	65.8	65.8
Percent of average (% 1 is of 2)	_____	100	100	100
1. Corn yield - bushels per acre	_____	68.5	74.4	61.3
2. Average yield on similar soil ^{e/}	_____	68.5	70.5	70.0
Percent of average (% 1 is of 2)	_____	100	106	88
1. Oats yield - bushels per acre	_____	54.1	57.8	51.5
2. Average yield on similar soil ^{e/}	_____	54.1	55.0	54.2
Percent of average (% 1 is of 2)	_____	100	105	95
1. Wheat yield - bushels per acre	_____	25.6	27.5	21.8
2. Average yield on similar soil ^{e/}	_____	25.6	26.8	26.5
Percent of average (% 1 is of 2)	_____	100	103	82
1. Soybean yield - bushels per acre	_____	23.8	27.4	21.8
2. Average yield on similar soil ^{e/}	_____	23.8	23.8	23.5
Percent of average (% 1 is of 2)	_____	100	115	93
1. Crop yield index - all grain crops	_____	100	109	91
2. Crop yield index on similar soil ^{e/}	_____	100	102	101
Percent of average (% 1 is of 2)	_____	100	106	91

a/ The percent (%) that the first figure is of the second is obtained by dividing the first by the second, then multiplying the result by 100.

b/ Gross earnings are used here as a measure of the quantities of farm commodities produced.

c/ The gross earnings per acre of each farm are compared with the average gross earnings per acre of farms on which the same value was placed on the bare land of the whole farm (Chart 4, page 25).

d/ The crop-system rating measures the relative profitableness of the crop system as it varies with the relative amounts of different kinds of crops grown on tillable land. See page 18 for further explanations.

e/ The average yield on similar soil was obtained by taking the average yield of all farms on which the improved land had been given the same value per acre. See page 54.

Table 3.--Some Factors That Affect Farm Incomes (Continued from page 6)

Item	Your farm	Average of 200 farms	40 most profitable farms	40 least profitable farms
<u>Cattle</u>				
1. Feed fed - total value.	\$ _____	\$ 2 427	\$ 2 141	\$ 2 452
2. Returns - total value	_____	3 469	3 219	3 097
3. Returns at average rate ^a /	_____	3 469	3 062	3 475
Percent of average (% 2 is of 3)	_____	100	105	89
<u>Hogs</u>				
1. Feed fed - total value.	\$ _____	\$ 1 670	\$ 2 044	\$ 1 516
2. Returns - total value	_____	2 644	3 395	2 233
3. Returns at average rate ^a /	_____	2 644	3 231	2 383
Percent of average (% 2 is of 3)	_____	100	105	94
<u>Sheep</u>				
1. Feed fed - total value.	\$ _____	\$ 116	\$ 90	\$ 161
2. Returns - total value	_____	149	126	167
3. Returns at average rate ^a /	_____	149	127	212
Percent of average (% 2 is of 3)	_____	100	99	79
<u>Poultry</u>				
1. Feed fed - total value.	\$ _____	\$ 206	\$ 253	\$ 184
2. Returns - total value	_____	382	502	335
3. Returns at average rate ^a /	_____	382	485	354
Percent of average (% 2 is of 3)	_____	100	104	95
<u>All productive livestock</u>				
1. Feed fed - total value.	\$ _____	\$ 4 419	\$ 4 528	\$ 4 313
2. Returns - total value	_____	6 644	7 242	5 832
3. Returns at average rate ^a /	_____	6 644	6 905	6 424
Percent of average (% 2 is of 3)	_____	100	105	91
<u>Price of products sold</u>				
1. Total value at prices received. .	\$ _____	\$10 724	\$10 544	\$ 9 789
2. Value at average prices	_____	10 724	10 427	9 957
Percent of average (% 1 is of 2)	_____	100	101	98

a/ The returns at average rate for any kind of livestock are the total returns which the cooperator would have received from the feed fed if he had received the same returns for each \$100 worth of feed fed as those received by the average cooperator feeding the same class of livestock. The average returns per \$100 worth of feed fed to different classes of livestock were as follows:

Beef-cow herds	\$121	Dual purpose and feeders	\$149
Dairy-cow herds	197	Beef, dairy, and feeders	146
Dual-purpose herds	165	Native flocks of sheep	147
Beef-cow and dairy herds	150	Feeder lambs bought	128
Feeders bought	128	Native flocks and feeders	125
Beef cows and feeders	133	Hogs	158
Dairy cows and feeders	146	Poultry	183

Table 3.--Some Factors That Affect Farm Incomes (Concluded)

Item	Your farm	Average of 200 farms	40 most profitable farms	40 least profitable farms
<u>Labor</u>				
1. Cost of hired and home labor ^a / . .	\$ _____	\$ 1 346	\$ 1 132	\$ 1 484
2. Labor cost at normal rate ^b / . . .	_____	1 346	1 277	1 319
Percent of normal (% 1 is of 2).	_____	100	89	113
<u>Horse and machinery</u>				
1. Cost for the farm ^c /	\$ _____	\$ 1 125	\$ 884	\$ 1 276
2. Cost at normal rate ^d /	_____	1 198	1 090	1 200
Percent of normal (% 1 is of 2).	_____	94	81	106
<u>Miscellaneous costs</u>				
1. Cost for the farm ^e /	\$ _____	\$ 1 258	\$ 1 029	\$ 1 437
2. Cost at normal rate ^f /	_____	1 258	1 137	1 303
Percent of normal (% 1 is of 2).	_____	100	90	110
Size of farm - total acres	_____	274	228	304
Size of business - days of work ^g / . . .	_____	456	441	444
Intensity of business - days per acre.	_____	1.66	1.93	1.46
Percent of tillable land in legumes ^h / .	_____	23.7	24.1	23.5
Feed per acre to livestock ⁱ /	\$ _____	\$ 16.13	\$ 19.85	\$ 14.18
Value per acre of all land	_____	122	125	119
Value per acre of improvements	_____	27	24	29
Percent of land tillable	_____	86	88	84

- a/ Labor cost includes the amount paid for hired labor, the value of family labor not paid for in cash, and the value of the operator's labor figured at the common rate of wages paid to good, married, men workers.
- b/ The labor cost at normal rate for any farm is the average labor cost for all the farms which require about the same amount of work on crops and livestock as the farm that is being considered (Table 25, page 55).
- c/ Horse cost includes depreciation and feed costs. Machinery cost includes the cost of depreciation, fuel, supplies, and repairs.
- d/ The horse and machinery cost at normal rate for any farm is the average horse and machinery cost for all the farms which require about the same amount of work on crops and livestock as the farm that is being considered, and which receive little or no income from custom work (Table 25, page 55).
- e/ Miscellaneous costs include costs for farm improvements, miscellaneous crop and livestock expenses, taxes and minor miscellaneous expenses.
- f/ The miscellaneous cost at normal rate for any farm is the average miscellaneous cost for all farms which require about the same amount of work on crops and livestock as the farm being considered (Table 25, page 55).
- g/ A day of work (or a productive man-work unit) is the amount of work done on crops and livestock by the average farm laborer in one ten-hour day. (See page 52).
- h/ Legumes, as used here, include only biennial and perennial legumes which occupy the land for the season.
- i/ On all farms feed is charged to livestock at uniform prices per bushel for grain and per day for pasture. Purchased supplements are charged at cost on each farm, and hay and silage are charged at the prices which prevail in the locality. (See Table 26, page 56).

Chart 1.—Farm Efficiency Chart

Rank of farms on total capital investments	Gross earnings factors													Costs—per- cent of normal			Organization					
	Gross earnings per acre— percent of average	Gross earnings per man— percent of average	Crop-system rating— percent of average	Crop yields—per- cent of average on similar soil					Livestock returns— percent of average from same feed								Price of products sold— percent of, average	Labor	Horses and machinery	Miscellaneous	Size of farm— total acres	Size of business— estimated days of work	Intensity of business— days of work per acre	Percent of land in biennial and perennial legumes	Feed per acre to livestock—dollars
				Corn	Oats	Wheat	Soybeans	All grain crops	Cattle	Hogs	Sheep	Poultry	All livestock									
1.6	200	200	120	128	135	147	139	120	150	150	170	150	125	120	60	40	61	1000	1200	4.83	44	67
	The best one-fifth of the farms in each factor comes between this line and the next line below.																					
5 nd 6	6 and 27	6 and 29	6 and 31	6 and 33	6 and 33	6 and 33	6 and 33	6 and 33	7 and 35	7 and 35	7 and 35	7 and 35	7 and 35	7 and 37	8 and 39	8 and 41	8 and 43	8 and 49	8 and 51	8	8	
1.9	120	121	105	110	112	125	116	109	113	113	125	111	109	104	85	75	82	340	566	2.27	30	24
1.6	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	94	100	274	456	1.66	24	16
	The average of the farms in each factor comes to this line.																					
0	83	84	95	86	87	77	79	88	86	93	75	83	90	95	120	115	119	170	323	1.29	18	9
	The lowest one-fifth of the farms in each factor comes between this line and the bottom line.																					
3	56	56	85	65	57	59	30	74	63	65	45	51	66	79	160	160	150	80	180	.70	0	2

Table 4.--Feeder-Cattle Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		49	16	16
Number of cows in herd		3.1	2.6	2.8
Number of cows milked.		2.3	2.0	2.2
Total animal units in herd		58.9	45.6	58.9
Percent of cattle units milked		3.9	4.4	3.7
Total feed to cattle	\$	\$4 260	\$3 044	\$4 400
Total returns from cattle.		5 460	4 427	4 988
Total returns at average rate.		5 460	4 001	5 732
Cattle efficiency - % of average returns		100	111	87
Returns per \$100 feed.	\$	\$ 128	\$ 145	\$ 113
Total pounds of beef produced.		42 775	34 658	39 700
Total pounds of milk produced.		16 317	14 272	13 831
Price paid per 100 lb. cattle bought .	\$	\$ 9.95	\$ 9.88	\$ 9.94
Price received per 100 lb. cattle sold		10.48	10.42	10.33
Feed charge per 100 lb. beef ^{b/}		9.59	8.43	10.71
Returns per 100 lb. beef ^{b/}		12.30	12.27	12.14
Percent of feed value that was:				
Grain.		67.5	68.6	67.9
Protein supplement		10.8	9.3	11.1
Salt and minerals.		.6	1.0	.4
Total concentrates		78.9	78.9	79.4
Hay.		8.6	9.7	8.8
Silage		8.1	5.6	7.7
Pasture.		4.4	5.8	4.1
Total roughages.		21.1	21.1	20.6

a/ Only farms that produced 10,000 pounds or more of beef from purchased feeder cattle were used in these comparisons.

b/ This is the feed charge or returns from 100 pounds of live weight of animal or 1,000 pounds of milk. Approximately the same amount of feed is required to produce either 100 pounds of beef or 1,000 pounds of milk.

Feeder Cattle. The average returns of \$128 for each \$100 worth of feed fed to feeder cattle on 49 farms were slightly more than the amount needed to pay for the feed, labor, use of equipment, and other costs. Feeder cattle gains appeared to be more dependent upon the low feed costs per 100 pounds' gain than upon the quality of cattle fed or the spread between the buying and selling prices. Compared with the 16 least profitable herds, the 16 most profitable ones had 2.28 less feed charges per 100 pounds, but had only 15 cents more spread.

Table 5.--Dairy-Cattle Enterprises^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		45	15	15
Number of cows in herd		17.1	19.5	16.2
Number of cows milked.		15.2	17.5	14.6
Total animal units in herd		24.8	27.8	23.5
Percent of cattle units milked		61.3	62.9	61.1
Total feed to cattle	\$	\$1 349	\$1 449	\$1 314
Total returns from cattle.		2 658	3 457	2 097
Total returns at average rate.		2 658	2 954	2 674
Cattle efficiency - % of average returns		100	117	78
Returns per \$100 feed	\$	\$ 197	\$ 239	\$ 160
Total pounds of beef produced.		7 378	8 118	6 352
Total pounds of milk produced.		123 826	149 214	108 380
Pounds of beef per cow in herd.		431	416	392
Pounds of milk per cow in herd		7 241	7 652	6 690
Pounds of milk per cow milked.		8 146	8 527	7 423
Price paid per 100 lb. cattle bought . .	\$	\$11.24	\$11.85	\$15.80
Price received per 100 lb. cattle sold .		7.57	7.39	7.61
Returns per 100 lb. milk produced. . . .		1.68	1.92	1.48
Feed charge per 100 lb. beef ^{b/}		6.83	6.29	7.65
Returns per 100 lb. beef ^{b/}		13.45	15.01	12.20
Percent of feed value that was:				
Grain.		33.5	31.2	34.0
Protein supplement		7.6	8.7	6.3
Salt and minerals		1.0	1.3	.9
Total concentrates		42.1	41.2	41.2
Hay.		21.5	22.4	21.4
Silage		19.7	18.6	21.1
Pasture.		16.7	17.8	16.3
Total roughages.		57.9	58.8	58.8

^{a/} Only farms which had five or more dairy cows and whose operators kept complete feed and production records were used in these comparisons.

^{b/} See footnote b of Table 4.

Dairy Cattle. The average dairy herd on the 45 farms where only dairy cattle were raised produced an average return of \$197 for every \$100 worth of feed fed. This indicates a small profit above feed, labor, and other costs. The most profitable one-third of the dairy herds produced \$239, and the least profitable one-third, \$160 for every \$100 worth of feed fed. Differences between the two groups of dairy herds which favored the more profitable ones were 1,104 pounds more milk produced per cow milked, 44 cents more received for each 100 pounds of milk sold, \$1.36 less feed charge made per 100 pounds of beef or 1,000 pounds of milk produced, 38 percent more protein feeds fed, and slightly less silage but a little more hay and pasture fed.

12.

Table 6.--Beef-Cow Herd Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		7	3	3
Number of cows in herd		25.6	30.3	23.8
Number of cows milked.		2.0	2.7	1.6
Total animal units in herd		39.2	43.6	36.9
Percent of cattle units milked		5.1	6.2	4.3
Total feed to cattle	\$	\$ 1 733	\$ 1 993	\$ 1 467
Total returns from cattle.		2 101	2 596	1 600
Total returns at average rate.		2 441	2 870	2 027
Cattle efficiency - % of average returns		86	90	79
Returns per \$100 feed.	\$	\$ 121	\$ 130	\$ 109
Total pounds of beef produced.		17 472	19 046	15 628
Total pounds of milk produced.		13 544	18 448	9 900
Pounds of beef per cow in herd		682	629	657
Pounds of milk per cow in herd		529	609	416
Pounds of milk per cow milked.		6 772	6 833	6 188
Price paid per 100 lb. cattle bought	\$	\$ 10.98	\$ 10.04	\$ 12.99
Price received per 100 lb. cattle sold		10.87	11.56	10.26
Returns per 100 lb. milk produced.		1.49	1.63	1.16
Feed charge per 100 lb. beef ^{b/}		9.20	9.56	8.83
Returns per 100 lb. beef ^{b/}		11.16	12.43	9.63
Percent of feed value that was:				
Grain.		43.2	47.8	33.3
Protein supplement		6.0	8.9	2.2
Salt and minerals.		.7	.7	.8
Total concentrates		49.9	57.4	36.3
Hay.		16.7	11.3	23.1
Silage		10.0	7.7	14.2
Pasture.		23.4	23.6	26.4
Total roughages.		50.1	42.6	63.7

^{a/} Only farms having five or more cows in the herd and whose operators kept complete feed and production records were used in these comparisons.

^{b/} See footnote b of Table 4.

Beef-Cow Herds. The number of beef-cow herds was too small for satisfactory comparisons. The seven herds brought returns approximately equal to the value of their feed, labor, and other costs.

Table 7.--Dual-Purpose Cattle Enterprises^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms.		12	4	4
Number of cows in herd		12.0	11.0	14.2
Number of cows milked.		5.8	5.6	7.1
Total animal units in herd		21.1	18.3	28.8
Percent of cattle units milked		27.5	30.6	24.7
Total feed to cattle	\$ _____	\$ 935	\$ 647	\$ 1 424
Total returns from cattle.	_____	1 461	1 293	1 863
Total returns at average rate.	_____	1 461	1 072	2 356
Cattle efficiency - % of average returns	_____	100	121	79
Returns per \$100 feed.	\$ _____	\$ 156	\$ 200	\$ 131
Total pounds of beef produced.	_____	9 759	7 936	12 670
Total pounds of milk produced.	_____	39 268	43 549	47 350
Pounds of beef per cow in herd	_____	813	721	892
Pounds of milk per cow in herd	_____	3 272	3 959	3 335
Pounds of milk per cow milked.	_____	6 770	7 777	6 669
Price paid per 100 lb. cattle bought . . .	\$ _____	\$ 11.44	\$ 12.93	\$ 11.40
Price received per 100 lb. cattle sold . .	_____	9.05	8.82	9.10
Returns per 100 lb. milk produced. . . .	_____	1.38	1.34	1.39
Feed charge per 100 lb. beef ^{b/}	_____	6.83	5.27	8.18
Returns per 100 lb. beef ^{b/}	_____	10.68	10.52	10.70
Percent of feed value that was:				
Grain.	_____	43.3	34.1	47.9
Protein supplement	_____	3.8	2.9	5.5
Salt and minerals.	_____	.7	.8	.5
Total concentrates	_____	47.8	37.8	53.9
Hay.	_____	24.3	29.0	19.0
Silage	_____	4.2	--	8.2
Pasture.	_____	23.7	33.2	18.9
Total roughages.	_____	52.2	62.2	46.1

^{a/} Only farms having five or more cows in the herd and whose operators kept complete feed and production records were used in these comparisons. Five of the twelve herds were strictly dual purpose; seven herds were mixed dairy and beef cows.

^{b/} See footnote b of Table 4.

Dual-Purpose Cattle. The 12 herds of dual-purpose cattle repaid their owners well. The four most profitable herds produced beef and milk at a very low feed cost. They were fed much less grain and more hay and pasture than were the four least profitable herds. Dual-purpose cattle produced both beef and milk at a low feed cost. While Farm Bureau Farm Management Service records have revealed this advantage repeatedly from year to year, they have also shown that the price received for the beef sold from dual-purpose herds is always low compared with the price received for beef from good beef-cow herds and from purchased feeder cattle.

14.

Table 8.--Sheep Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
<u>Native flocks of sheep</u>				
Number of flocks		25	8	8
Total feed to sheep.	\$ _____	\$ 209	\$ 167	\$ 233
Total returns from sheep	_____	307	324	239
Total returns at average rate.	_____	309	247	346
Sheep efficiency - % of average returns		99	131	69
Returns per \$100 feed.	\$ _____	\$ 147	\$ 194	\$ 103
Pounds of mutton and wool produced	_____	3 047	2 827	2 887
Returns per 100 lb. produced	\$ _____	\$ 10.08	\$ 11.46	\$ 8.28
Feed charge per 100 lb. produced	_____	6.86	5.91	8.07
Price per 100 lb. sold	_____	10.74	10.71	10.51
<u>Percent of feed value that was:</u>				
Grain.	_____	26.5	20.8	34.3
Protein supplement	_____	.7	.2	1.4
Salt and minerals.	_____	.6	.4	.6
Total concentrates	_____	27.8	21.4	36.3
Hay.	_____	18.4	20.8	17.6
Silage	_____	1.2	--	--
Pasture.	_____	52.6	57.8	46.1
Total roughages.	_____	72.2	78.6	63.7
<u>Feeder lambs bought</u>				
Number of flocks		5	2	2
Total feed to sheep.	\$ _____	\$ 916	\$ 338	\$ 1 281
Total returns from sheep	_____	1 176	489	1 521
Total returns at average rate.	_____	1 236	457	1 706
Sheep efficiency - % of average returns.		95	107	89
Returns per \$100 feed.	\$ _____	\$ 128	\$ 145	\$ 119
Pounds of mutton and wool produced	_____	13 282	6 330	14 646
Returns per 100 lb. produced	\$ _____	\$ 8.85	\$ 7.73	\$ 10.39
Feed charge per 100 lb. produced	_____	6.90	5.34	8.75
Price per 100 lb. bought	_____	9.47	9.95	9.19
Price per 100 lb. sold	_____	9.20	9.78	9.00
<u>Percent of feed value that was:</u>				
Grain.	_____	66.4	51.6	67.9
Protein supplement	_____	1.2	--	.8
Salt and minerals.	_____	1.9	1.0	1.4
Total concentrates	_____	69.5	52.6	70.1
Hay.	_____	16.6	19.8	18.0
Silage	_____	--	--	--
Pasture.	_____	13.9	27.6	11.9
Total roughages.	_____	30.5	47.4	29.9

^{a/} Farms were divided into groups according to the returns per \$100 feed fed to sheep. Only farms having three or more animal units in sheep were used in this comparison.

Sheep. Most of the native flocks of sheep paid well for their feed at the prices charged, especially since more than 70 percent of their feed consisted of hay and pasture which have little or no market value. The most profitable flocks were fed less grain and more hay and pasture than the least profitable flocks.

Feeder sheep, like feeder cattle, brought a little more than enough average returns to pay for their feed, labor, and other costs of production. A few droves did very well, while others lost money.

Table 9.--Poultry Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms		73	24	24
Total feed to poultry	\$ _____	\$ 270	\$ 243	\$ 269
Total returns from poultry	_____	494	548	393
Total returns at average rate ^{b/}	_____	518	467	515
Poultry efficiency - % of average returns	_____	95	117	76
Returns per \$100 feed	\$ _____	\$ 183	\$ 225	\$ 146
Average number of hens kept	_____	149	149	139
Average number of eggs produced per hen	_____	138	146	120
Total returns per hen	\$ _____	\$ 3.32	\$ 3.67	\$ 2.84
Average price of eggs per dozen	_____	.21	.22	.21
Percent of eggs laid in Oct., Nov., Dec.	_____	26.8	28.8	23.3
Feed charge per 100 lb. feed.	\$ _____	\$ 1.35	\$ 1.33	\$ 1.34

^{a/} Farms were divided into groups according to the returns per \$100 feed fed to poultry. Only flocks having 50 or more hens were used in this comparison.

^{b/} The average returns per \$100 feed fed were higher for all 200 farms than on the farms used in this comparison.

Poultry. Poultry raising is a minor enterprise on most of the farms included in this report. The 73 farmers whose flocks contained 50 or more hens received \$183 for every \$100 worth of feed fed. One-third of the flocks returned an average of \$225, and one-third returned only \$146 for every \$100 worth of feed fed. The more profitable group of flocks, compared with the less profitable group, produced an average of 26 more eggs per hen, produced more fall and winter eggs, and returned 1 cent more per dozen for eggs sold.

16.

Table 10.--Hog Enterprise^{a/}

Item	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms		176	59	59
Total feed to hogs	\$ _____	\$ 1 871	\$ 1 670	\$ 1 866
Total returns from hogs	_____	2 963	3 109	2 513
Total returns at average rate	_____	2 963	2 653	2 912
Hog efficiency - % of average returns	_____	100	117	86
Returns per \$100 feed	\$ _____	\$ 158	\$ 186	\$ 135
Total pounds of pork produced	_____	40 130	40 149	35 809
Average weight per hog sold - pounds.	_____	252	248	255
Pigs weaned per litter (172 farms).	_____	6.4	6.5	6.1
Percent of sales for year on hand Jan. 1	_____	40.2	39.0	44.3
Feed cost per 100 lb. pork produced	\$ _____	\$ 4.66	\$ 4.16	\$ 5.21
Price received per 100 lb. sold	_____	7.14	7.34	6.89
Pounds of feed per 100 lb. pork	_____	411	364	463
Pounds protein feed per 100 lb. feed.	_____	9.3	9.2	9.3
Percent of feed value that was:				
Grain	_____	78.5	78.6	78.6
Protein supplement.	_____	18.9	18.9	19.1
Salt and minerals	_____	.7	.4	.6
Hay and pasture	_____	1.9	2.1	1.7

a/ Farms were divided into groups according to the returns per \$100 feed fed to hogs. Only farms producing 10,000 pounds or more per farm per year were used in this comparison.

Hogs. About 28 percent of all the livestock income on the 200 farms was from hogs. On farms on which a considerable portion of the income is from hogs, the efficiency with which feed is converted into pork becomes one of the most important factors that affect farm incomes. One-third of the pork-producing farms received \$186 per \$100 worth of feed fed while another one-third received only \$135 for each \$100 of feed.

The feed cost per 100 pounds of pork produced was \$1.05 less on the 59 best hog farms, and the selling price was 45 cents per hundred pounds higher than on the 59 poorest hog farms. These data show that a high or low feed cost is usually a much more important factor in determining net returns from hogs than is the selling price. Larger litters, ample protein feeds, and early selling all contributed to the greater net returns on the more successful hog farms.

Part II

The farm earnings of the 40 cooperators who did the best work with each of several important farming factors and the 40 cooperators who did the poorest work with them are shown in Part II of this report. The value of having a well-balanced farm business and the relationship between source of income, size of farm, and intensity of business are also shown.

Each cooperator can see just where his farm fits into the picture regarding each efficiency and organizational factor by locating the sign (+) which represents his farm on each of the charts. The sign (+) for any farm can be located in the following manner:

First, locate the point on the lower line of the chart which measures the efficiency of the farm for the factor being considered. (The figure measuring each cooperator's efficiency is shown in the "Your Farm" column of the page opposite the chart.) Second, draw a line from this point on the bottom line straight to the top of the chart. Third, draw a horizontal line across the chart at the level which represents the rate earned on the investment of the farm. (The rate earned is also shown in the "Your Farm" column of the opposite page.) Fourth, draw a circle around the sign (+) which is nearest the point where the two lines cross, since this sign represents the reader's farm.

Relation of Different Factors to the Net Farm Earnings and to One Another

Gross earnings per acre. The 40 farms with the highest gross earnings per acre produced \$52.03 worth of crop and livestock products per acre annually. This amount was more than double the \$25.73 worth that was produced on the 40 farms with the lowest gross earnings per acre (Table 12, page 27). The close relationship between gross earnings per acre and net farm earnings is shown in Chart 5, page 26. None of the 40 farms on similar soil having lowest gross earnings per acre were among those 40 having the highest net earnings, and none of the farms with the highest gross earnings were among the 40 receiving the lowest net earnings.

Compared with the 40 farms with the lowest gross earnings, the 40 farms which had the highest gross earnings per acre were much smaller, but had developed larger businesses, and they fed three times as much feed per acre, grew more biennial and perennial legumes, used a more profitable crop system, produced much better yields of crops, and produced more livestock for the feed fed. Tenants and landlords profited alike from high gross earnings per acre.

Gross earnings per man. Forty farms produced an average of \$6,774 gross earnings per man, including home and hired labor. Forty other farms produced only \$3,408 gross earnings per man (Table 13, page 29). Net earnings were nearly 50 percent higher on the 40 farms with the highest gross earnings than on the farms with the lowest gross earnings.

Compared with the 40 farms with the lowest gross earnings per man the 40 farms that had the highest gross earnings per man were 30 percent larger, were located on more productive land, had more profitable crop systems, produced higher yields of crops in proportion to the quality of the land, produced more livestock for each \$100 worth of feed fed, and produced more beef cattle and hogs and less dairy and poultry products. Table 21, page 47, shows that larger gross earnings per man were obtained on grain, beef cattle, and hog farms than on other types of farms.

18.

The crop system. The relative profitableness of the crop system on a farm is measured by the crop-system rating. This rating was calculated for each farm by multiplying the acres of each crop by the standard crop rating given below, by adding the total ratings for all crops grown on tillable land, and by dividing the latter total by the number of tillable acres.

Standard Crop Ratings

<u>Kind of crop</u>	<u>Crop rating</u>	<u>Kind of crop</u>	<u>Crop rating</u>
Corn	80	Timothy hay	40
Oats	40	Soybean hay	50
Winter wheat	70	Sweet clover	70
Barley	60	Bluegrass	50
Soybeans for grain	70	Truck crops	100
Alfalfa hay	100	Sweet corn	80
Clover or mixed hay	50		

These ratings given to different crops are approximately in proportion to the average net earnings per acre to be expected on the tillable land if factors other than the crop system are equal. The crop ratings were made up from average results of several years of complete cost studies conducted by the Department of Agricultural Economics and from other experimental data. At the time the ratings were fixed, no credit was given to legumes for their soil-improvement value.

Compared with the 40 farms with the lowest ratings, the 40 farms with the highest crop-system ratings, made larger gross earnings per acre and per man (Table 14, page 31). However, the net returns on the capital investments were practically the same for both groups of farms, because better crop systems were found on the farms of higher land value. Most of the farmers on these farms co-operated in the AAA program, and this fact has tended to develop approximately the same proportions of corn, small grain, and soil-conserving crops on different farms. If the AAA program had not led farmers to use similar combinations of crops, the cropping system on a farm would be an important factor accounting the differences in earnings between farms. Most of the differences between the 40 farms with the highest crop-system ratings and the 40 farms with the lowest ratings arose from the amounts of alfalfa and sweet clover grown contrasted with the amount of red and alsike clover grown.

Crop yields. Crop yields influenced the amount of net farm earnings more than any other single factor except livestock efficiency (Chart 3, page 24). The 40 farms with the highest yields of grain (115 percent of average) brought in average net incomes of 11.8 percent on their total farm investments; the 40 farms with the lowest yields (84 percent of average) brought in incomes of only 8.9 percent (Table 15, page 33). This difference of 2.9 percent, applied to the average farm capital of \$53,361, amounts to \$1,548 (Chart 3, page 24).

The definite relationship between the amount of livestock fed, the amount of legumes grown, and crop yields is shown in Table 15. The 40 highest yielding farms fed feed valued at \$21.92, and 25.3 percent of their tillable land was planted in biennial and perennial legumes, but the 40 lowest yielding farms fed feed valued at only \$14.18 per acre and only 22.7 percent of their tillable land was planted in biennial and perennial legumes.

Beef cattle farms and dairy farms produced higher average yields than other types (Table 21, page 47). Other Farm Bureau Farm Management Service reports have shown this same relationship of large cattle enterprises to high crop yields.

Some cooperators obtained low average yields because they slighted their work on seedbed preparation, cultivation, and care of crops. The low average labor, power, machinery, and miscellaneous costs on the 40 farms with low crop yields indicate that some cooperators spread their labor and power and machinery over more acres than was desirable if the best crop yields and best farm incomes were to be secured. Other Farm Bureau Farm Management Service reports have shown this same relationship between low operating costs and low yields, which foretells one of the serious problems of wartime production with its labor shortage and the need for high yields.

Many cooperators may profit by making careful studies of the practices followed by those who secure high crop yields and then by putting some of those practices into effect on their own farms.

Landlords as well as tenants profited greatly from the good crop yields on cooperating farms. The landlords on the 19 rented farms among the 40 farms with the best yields received average net returns of 7.9 percent on their investments; the 23 landlords among the owners of the 40 farms with the poorest yields received only 5.2 percent. The tenant's labor and management earnings amounted to \$3,041 per farm per year on the 19 high-yielding rented farms but only \$2,666 on the 23 low-yielding ones. Neither landlords nor tenants can afford to neglect those practices that lead to high crop yields.

Livestock efficiency. Livestock efficiency had more to do with causing net farm incomes to be high or low than any other factor (Chart 3, page 24). The 40 farms with the largest returns for the feed fed earned an average of 12.3 percent on their farm investment; the 40 with the lowest returns earned an average of only 8.5 percent. This difference of 3.8 percent amounted to \$2,027 when applied to the average farm investment of \$53,361 (Table 16, page 35, and Chart 3, page 24).

The 40 farms that proved most efficient in livestock production brought in average returns from productive livestock amounting to \$6,781 per farm per year. If the farmers had fed the same amounts of feed to the same classes of livestock at the average rate of return for each \$100 feed fed, the returns would have been only \$5,904, a difference of \$877. The cooperators' returns were, therefore, 115 percent of the average. The 40 least efficient farms brought in only 84 percent of the average returns from feed fed or \$1,039 less income from livestock than the average received for the same value of feed fed to the same kinds of livestock.

The average returns for all the classes of livestock were much better for the feed fed on the former group of farms than on the latter. The percent of average efficiency on the two groups of farms were as follows: cattle, 115 and 83; hogs, 116 and 87; sheep, 108 and 81; and poultry, 107 and 86.

Prices of products sold. Differences in the prices of products sold had less effect on net farm earnings than any other of the factors considered in this report except the crop system (Chart 3, page 24). The AAA program has tended to level off prices of grain.

20.

Any cooperator who finds that the price of a major product sold from his farm is much below the prices received by others may profit from a more careful study of his marketing problems.

Labor costs. Although low labor costs are desirable, many of the co-operators sacrificed crop yields and livestock efficiency when they reduced their labor costs (Table 18, page 39). The labor costs from the 40 farms where they were lowest were \$321 per farm per year less than the average costs of all farms which required the same care for crops and livestock; but the labor costs on the 40 farms where they were highest were \$431 higher than the average costs of similar farms. The net earnings on the investment for the first group of farms were 1.5 percent higher than the average net earnings of all the farms, and the net earnings of the second group were 1.4 percent lower than average. Crop yields on the farms with the lowest labor costs were only 97 percent of average crop yields, but yields from the farms with the highest costs were 101 percent of average.

High horse and machinery costs were usually found on farms where labor costs were high. The horse and machinery costs were 79 percent of normal on the 40 farms with the lowest labor costs and 118 percent of normal on the 40 farms with the highest labor costs. Likewise, miscellaneous costs on these two groups of farms were 87 and 120 percent of normal, respectively.

Horse and machinery costs. Average net power and machinery costs for the 40 farms where they were lowest for the amount of work done, were \$1,002 per year, after an income of \$241 per farm from custom work had been credited (Table 19, page 41). The normal costs for farms with the same amounts of work on crops and on livestock as the above group and with little or no income from custom work was \$1,594 per year.

The farms with the lowest horse and machinery costs (63 percent of normal) returned average net earnings on their investment .7 percent higher than the average costs for all the 200 farms. Some of this advantage could be attributed to the income of these farms from custom work rather than to their actual lower costs of operation. On the other hand, the high power and machinery costs on the other group of farms, which were \$350 higher than the average costs of similar farms, were largely due to high operating costs.

Those farms with the lowest costs for power and machinery had, on the average, an advantage in several important places: Their net cost of operation was \$37 less for autos per farm per year, \$32 less for trucks, \$102 less for tractors, and \$192 less for other machinery. Part of the lower net cost for different items of machinery was due to a total of \$202 more income received for the use of machinery.

A study of these and similar records kept by Farm Bureau Farm Management Service cooperators during the past 15 years shows clearly that, although many of these farms owe a considerable part of their low net incomes to high labor and power and machinery costs, more of them owe their low incomes to low crop yields and inefficient livestock. Securing a proper balance between labor and power and machinery costs and the amount of work to be done is one of the most difficult problems in farm management.

Miscellaneous costs. The 40 farms with lower-than-normal costs for items other than labor and horses and machinery earned 2.2 percent more on the farm investment than the 40 farms with the highest costs (Table 20, page 43).

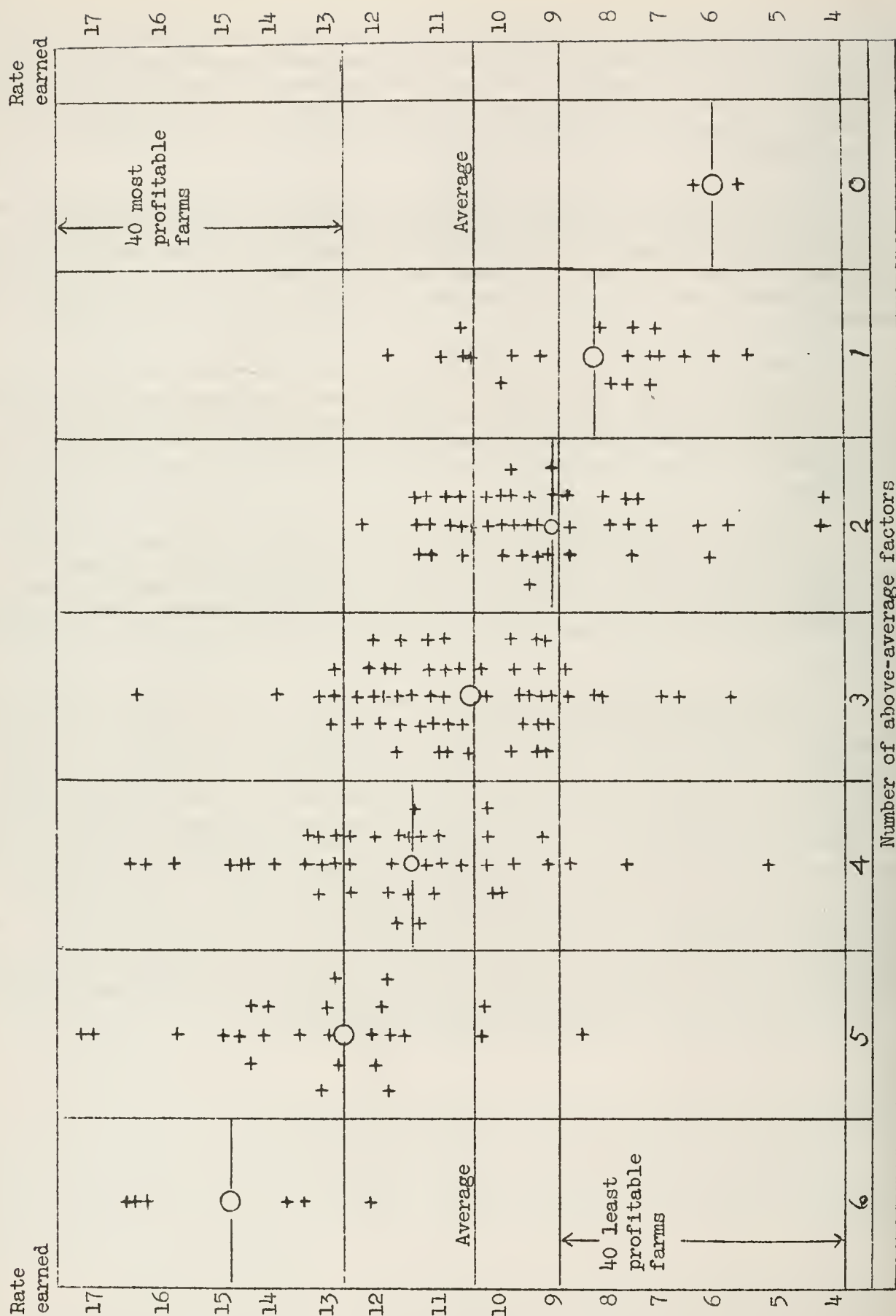
A great deal of the higher costs on the high-miscellaneous-cost farms came from farm improvements. Since some of these costs represented the purchase of limestone and rock phosphate, the high-improvement-cost farms had more land in soil-building legumes, had better crop systems because more alfalfa and sweet clover were planted, and had higher crop yields because a better legume program had been adopted.

Relative effects of seven efficiency factors on net farm earnings. An indication of the relative effects of the seven efficiency factors discussed above is shown in Chart 3, page 24. While in no case does this analysis measure the net differences in farm earnings due to high or low efficiency of each factor, it does show in a general way the relative importance of the factors in their effects on earnings.

Livestock efficiency is revealed to be more effective than any other factor in making earnings high or low. Farm Bureau Farm Management Service records have shown repeatedly that the efficient production, feeding, and marketing of livestock and livestock products are the one most important factor in making farm earnings high or low in areas where one-half or more of the crops produced are fed on the farm.

High and low crop yields and low and high labor costs appear to have about equal effects on farm earnings and are next in importance to livestock efficiency in their effect on earnings. Next in order are miscellaneous costs, which include farm improvements, crop expenses, livestock expenses, taxes and miscellaneous items; horse and machinery costs; prices of products sold, and the crop system.

Value of well-balanced farming. The value of good, well-balanced farming in which the operator does at least fairly well with all the important efficiency factors, is clearly shown in Chart 2, page 22 and Table 11, page 23. Six farms that scored better than the average of all the 200 farms in the study in livestock efficiency, crop yields, low labor costs, low miscellaneous costs, low horse and machinery costs, and high prices, returned average net earnings of 14.9 percent on their total farm investments. Each of the six farms earned above 12 percent. Two farms that were below average in all six factors earned only 5.9 percent and 6.6 percent. Twenty-five farms that were above average in five of the six factors earned an average of 12.9 percent on the total farm investments, while farms that were below average in five factors earned only 8.4 percent on the total farm investments. The 4.5 percent difference in net earnings on the investment between these two groups of farms, when applied to the average farm capital, amounts to \$2,400 per farm per year. Truly, it pays to farm well.

Chart 2.--Number of Above-Average Factors as Related to the Rate Earned on the Total Farm Investment^{a/}

^{a/} Each sign (+) represents a farm, as farms were distributed into the seven columns according to the number of six efficiency factors in which the farm ranked above average, and from the bottom to the top of the chart according to the rate earned on the total farm investment. The signs (---O---) represent the averages of groups of farms. See the discussion on page 21 and Table 11, page 23.

Table 11.--Number of Above-Average Factors as Related to Net Farm Earnings and Other Factors^{a/}

Item	Number of above-average factors					
	6	5	4	3	2	1 0
Number of farms	6	25	43	58	46	20 2
Rate earned on investment	14.9%	12.9%	11.7%	10.7%	9.2%	8.4% 6.3%
Labor and management earnings	\$5 541	\$4 460	\$3 997	\$3 738	\$2 750	\$2 515 \$ 864
Labor earnings per man.	3 279	2 661	2 444	2 304	1 775	1 671 1 011
Gross earnings per acre	45.41	35.86	38.40	35.64	33.86	31.51 21.20
Gross earnings per man.	5 887	5 110	5 254	5 175	4 258	4 327 3 148
Size of farm - total acres.	244	278	267	287	255	298 273
Size of business - days of work	496	532	474	464	400	428 331
Crop system rating - % of average	100	101	99	100	100	100 103
Crop yields - % of av. on similar soil.	105	102	102	98	98	92 88
Livestock efficiency - % of average	107	103	100	98	96	94 84
Labor costs - % of average.	85	86	95	99	115	123 132
Horse and machinery costs - % of average	83	70	85	91	109	114 116
Miscellaneous costs - percent of average	83	88	94	97	112	117 111
Price of products sold - % of average	104	103	100	99	99	99 93
Rented farms - number	2	14	25	28	25	10 0
Size of farm - total acres.	220	295	236	289	268	241 --
Tenant's returns for labor, cap., mgt.	\$3 693	\$3 945	\$3 561	\$3 573	\$3 005	\$2 502 --
Tenant's labor and management earnings	3 301	3 533	3 170	3 120	2 626	2 169 --
Landlord's returns for capital.	3 564	2 985	2 539	2 772	2 672	2 154 --
Landlord's rate earned on investment.	9.1%	7.2%	6.7%	6.2%	6.0%	5.7% --

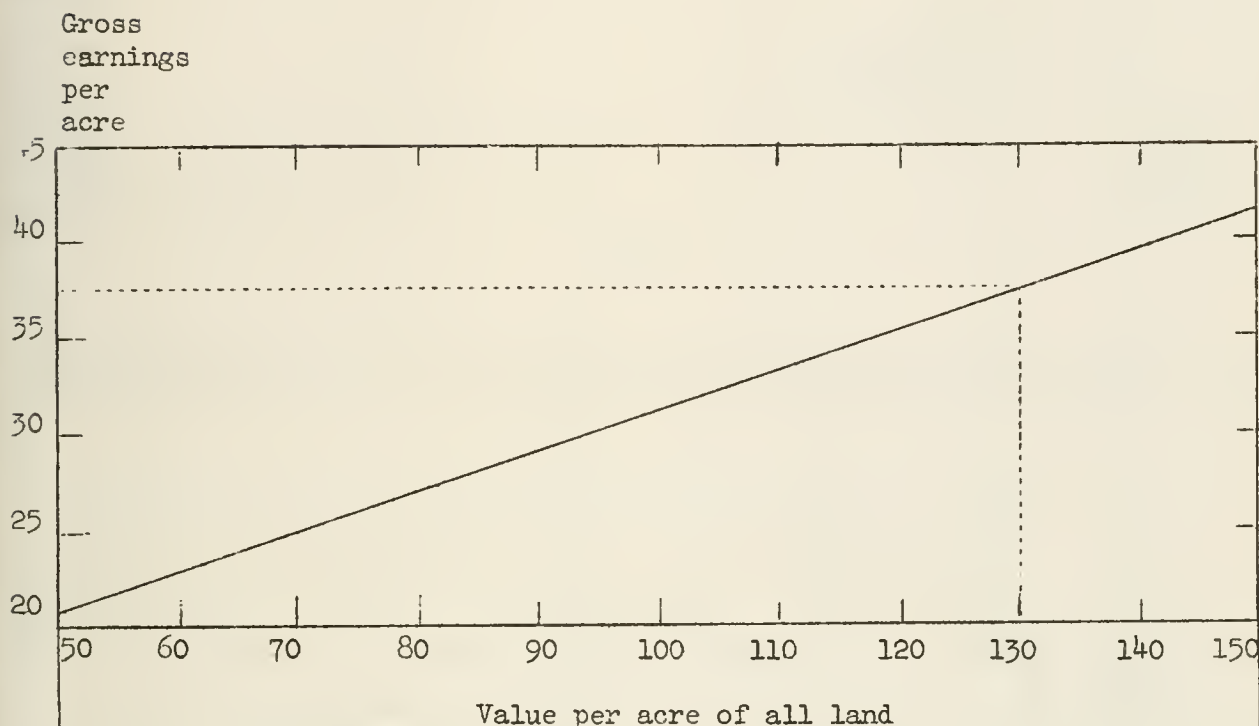
a/ The farms were grouped according to the number of six efficiency factors in which they scored better than the average of all 200 farms. They were: (1) crop yields; (2) livestock efficiency; (3) prices received for products sold; (4) labor costs; (5) horse and machinery costs; and (6) miscellaneous costs.

Chart 3.--Relation of Some Important Factors
of Production to Farm Earnings

Factors considered	Number of farms and quality of factors	Annual net farm earnings					Average \$5680
		\$1000	\$2000	\$3000	\$4000	\$5000	\$6000
Livestock efficiency (See page 35)	40 best						\$6563
	40 poorest				\$4536		\$2027
Crop yields (See page 33)	40 best						\$6297
	40 poorest				\$4749		\$1548
Labor costs (See page 39)	40 lowest						\$6457
	40 highest				\$4909		\$1548
Miscellaneous costs (See page 43)	40 lowest						\$6243
	40 highest				\$5069		\$1174
Horse and machinery costs (See page 41)	40 lowest						\$6030
	40 highest				\$5016		\$1014
Prices received (See page 37)	40 highest						\$5923
	40 lowest				\$5229		\$694
Crop system (See page 31)	40 best						\$5710
	40 poorest						\$53

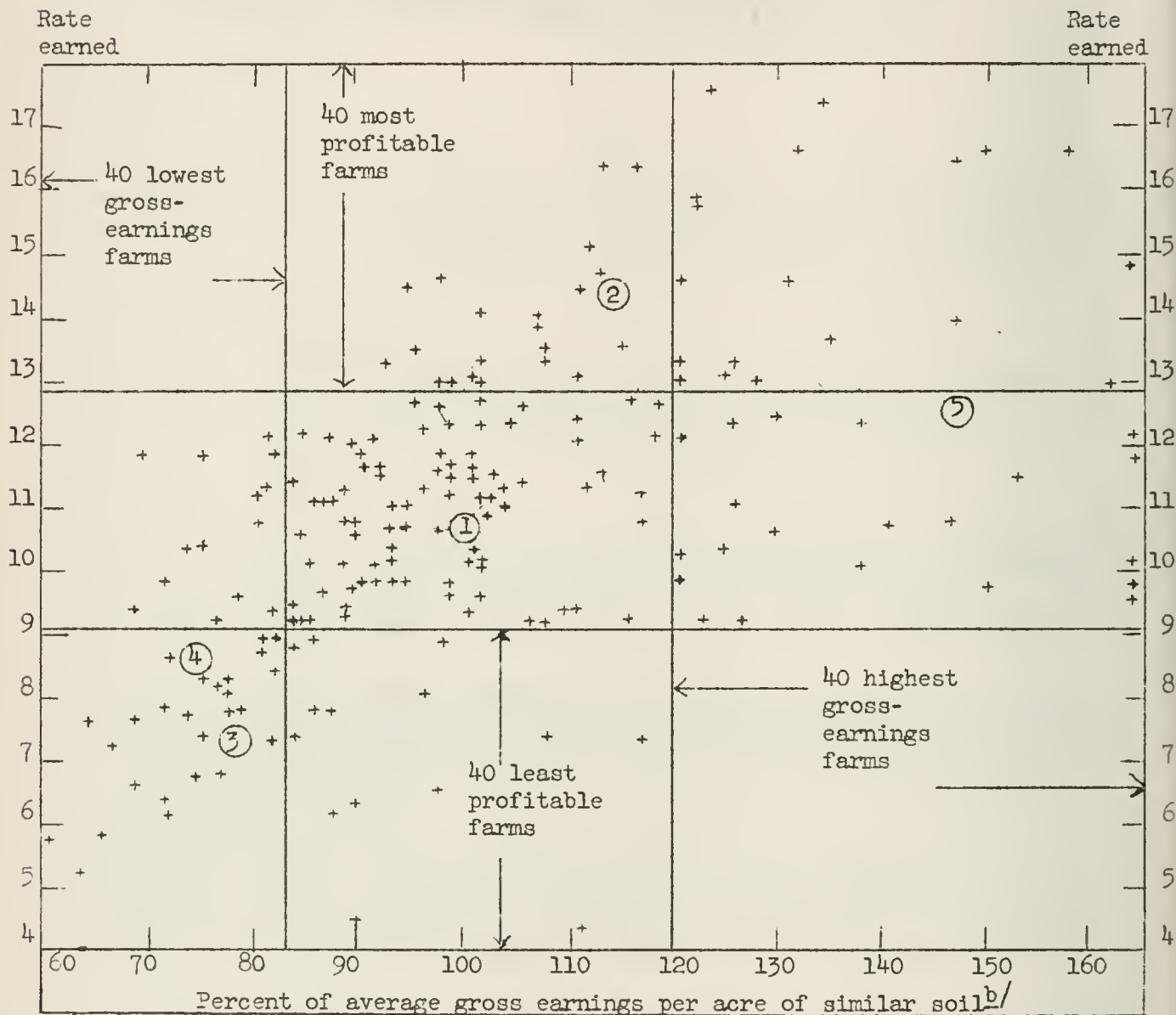
While in no case does analysis of the above chart measure the net differences in farm incomes due to the high or low efficiency of each factor, it does show in a general way the relative importance of the factors in their effects on incomes. The net incomes shown are adjusted to the average capital investment by applying the rate earned by each group to the average capital on all 200 farms. See page 21 for further discussion.

Chart 4.--Gross Earnings per Acre as Related to the Value per Acre of All Land



a/ The average gross earnings per acre for farms having a given land value per acre can be found by using this chart in the following manner: Locate on the bottom line the acre value of all land (Table 3, page 8) on the farm; draw a perpendicular line with a sharp-pointed pencil from that point to the top of the chart; then draw a horizontal line across the chart from the point where the perpendicular line crosses the sloping line; and finally, read the average gross earnings per acre at the point where the horizontal line intersects the scale of the chart on the left-hand side. For example, the average gross earnings per acre of a farm valued at \$130 per acre are \$37.50, according to the chart.

Chart 5.--Gross Earnings per Acre as Related to the Rate Earned on the Total Farm Investment^{a/}



a/ Each sign (+) represents a farm, as the farms were distributed from the left to the right of the chart according to the percent of average gross earnings per acre, and from the bottom to the top according to the rate earned on the total farm investment. See discussion on page 17.

b/ Average gross earnings per acre as related to the value per acre of all farmland are shown in Chart 4, page 25.

- ① - Average of all 200 farms (Table 12, page 27).
- ② - Average of 40 most profitable farms (Table 3, page 6).
- ③ - Average of 40 least profitable farms (Table 3, page 6).
- ④ - Average of 40 farms with the lowest gross earnings per acre (Table 12, page 27).
- ⑤ - Average of 40 farms with the highest gross earnings per acre (Table 12, page 27).

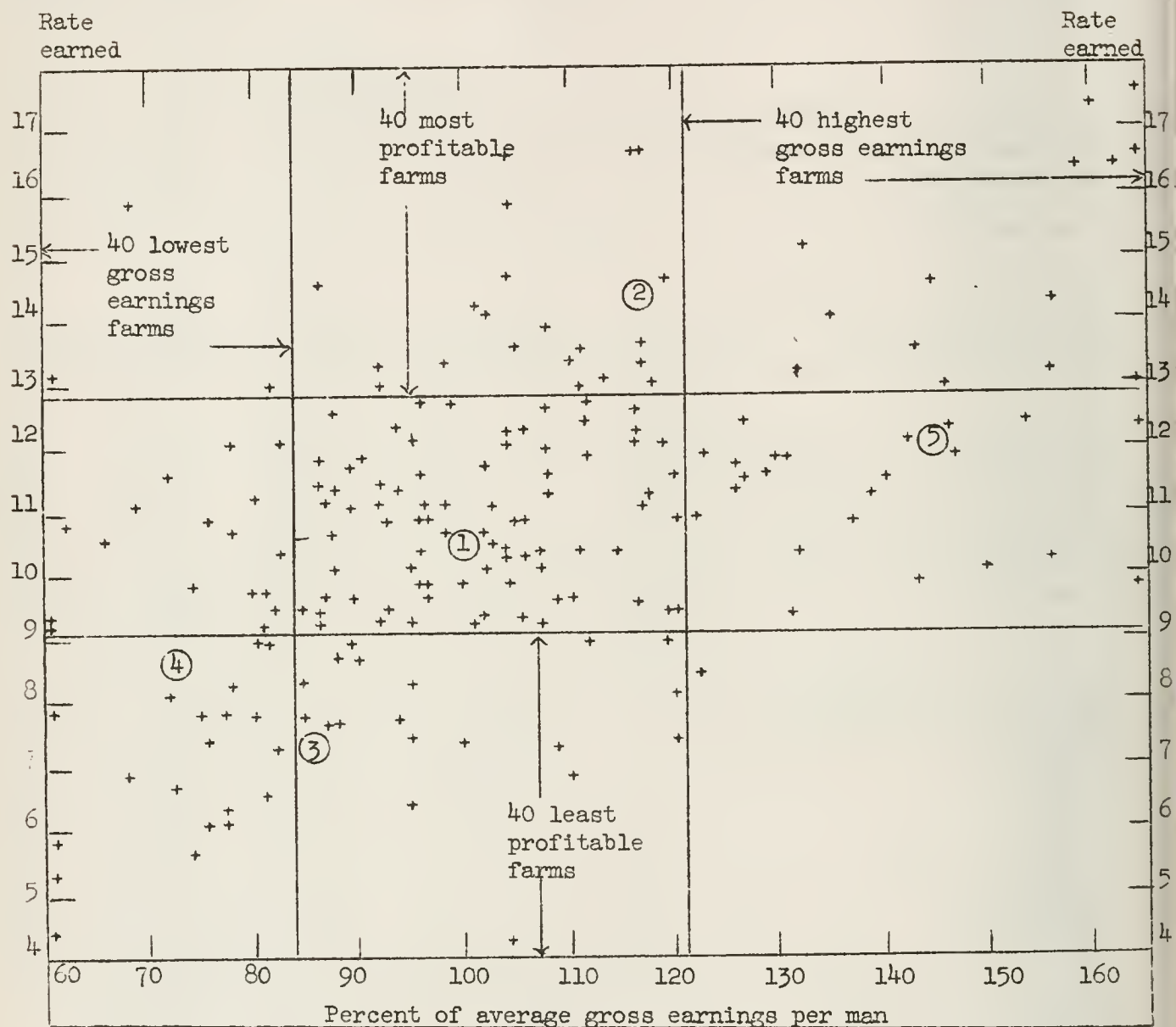
Table 12.--Gross Earnings per Acre as Related to Net Farm
Earnings and Other Factors^{a/}

Item	Your farm	Average of all 200 farms	40 farms with high gross earnings per acre	40 farms with low gross earnings per acre
Rate earned on investment.	%	10.6%	12.5%	8.6%
Labor and management earnings.	\$	\$3 560	\$4 175	\$2 704
Labor earnings per man		2 205	2 442	1 745
Gross earnings per acre.		34.04	52.03	25.73
Gross earnings per man		4 685	5 528	4 431
Size of farm--total acres.		274	217	350
Size of business--days of work		456	524	452
Feed per acre--value	\$	\$16.13	\$30.55	\$10.00
Percent of tillable land in legumes ^{b/}		23.7	25.4	21.5
Crop system rating - % of average		100	103	99
Crop yields - % of average on similar soil		100	107	87
Livestock efficiency - % of average.		100	102	93
Labor costs - % of average		100	94	100
Horse and machinery costs - % of average		94	83	90
Miscellaneous costs - % of average		100	100	94
Price of products sold - % of average.		100	102	97
Percent of average gross earnings per acre		100	147	75
Value of all land per acre	\$	\$ 122	\$ 121	\$ 115
Percent of gross earnings from:				
Cattle		27.9	34.4	22.3
Hogs		28.0	40.1	19.9
Sheep.		1.6	1.6	1.6
Poultry and eggs		3.5	4.2	2.5
Dairy products		7.7	7.5	5.9
Grain.		18.5	3.1	33.4
AAA payments		8.8	5.6	10.5
Miscellaneous.		4.0	3.5	3.9
Rented farms--number		104	17	21
Size of farm--total acres.		266	207	364
Tenant's returns for labor, cap., mgt.	\$	\$3 383	\$3 721	\$2 917
Tenant's labor and management earnings		2 981	3 299	2 502
Landlord's returns for capital		2 678	2 575	2 750
Landlord's rate earned on investment	%	6.4%	7.1%	5.6%

^{a/} The farms were grouped according to their gross earnings per acre. See discussion on page 17.

^{b/} Only biennial and perennial legumes alone or in mixtures were included.

Chart 6.--Gross Earnings per Man as Related to the Rate Earned on the Total Farm Investment^a



a/ Each sign (+) represents a farm, as farms were distributed from the left to the right of the chart according to the percent of their average gross earnings per man (Table 13, page 29), and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 13, page 29).
- ② - Average of 40 most profitable farms (Table 3, page 6).
- ③ - Average of 40 least profitable farms (Table 3, page 6).
- ④ - Average of 40 farms having the lowest gross earnings per man (Table 13, page 29).
- ⑤ - Average of 40 farms having the highest gross earnings per man (Table 13, page 29).

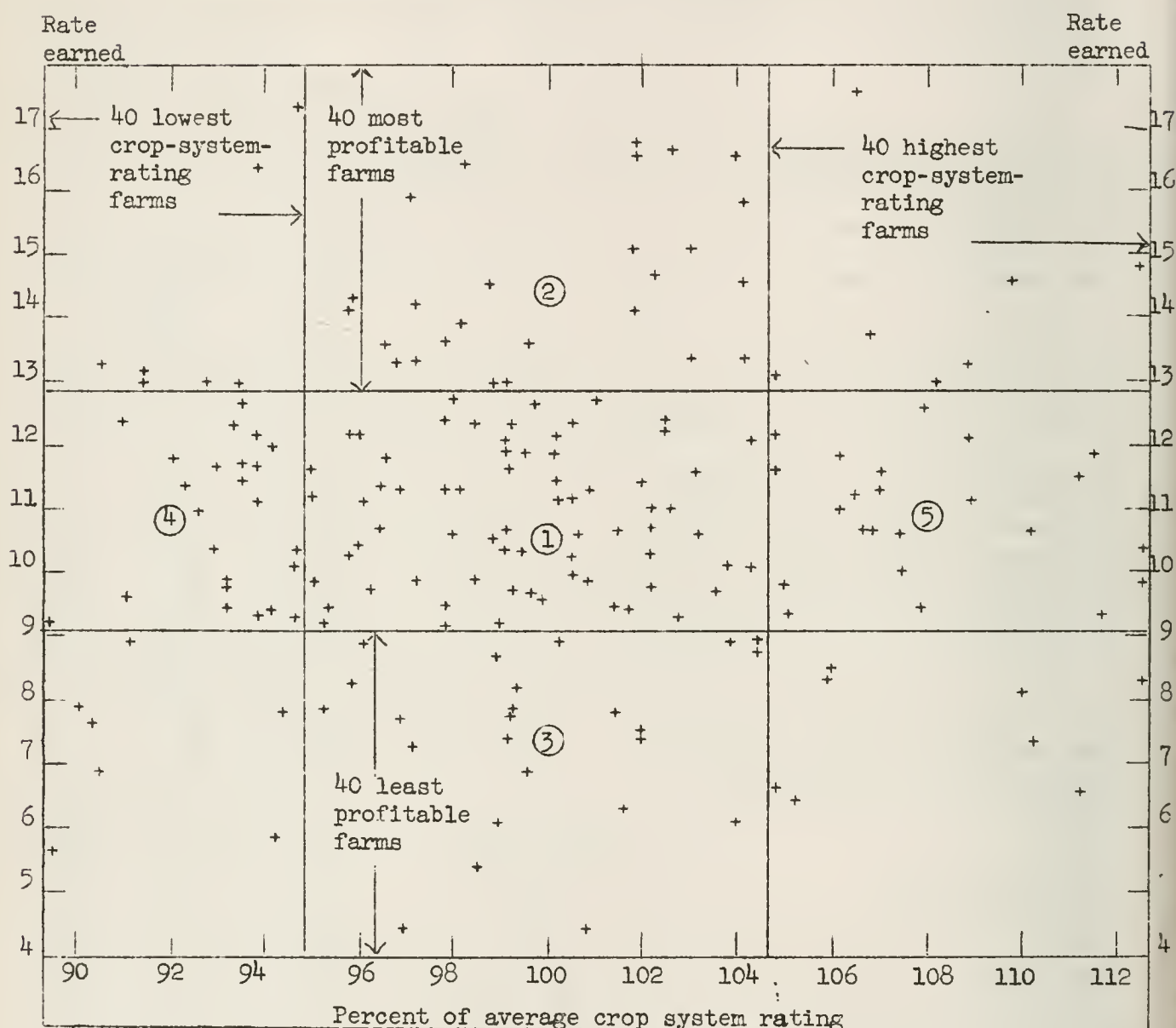
Table 13.--Gross Earnings per Man as Related to Net Farm
Earnings and Other Factors^{a/}

Item	Your farm	Average of all 200 farms	40 farms with high gross earnings per man	40 farms with low gross earnings per man
Rate earned on investment.	_____ %	10.6%	12.1%	3.7%
Labor and management earnings.	\$ _____	\$3 560	\$5 038	\$2 071
Labor earnings per man	_____	2 205	3 079	1 411
Gross earnings per acre.	_____	34.04	42.09	28.89
Gross earnings per man	_____	4 685	6 774	3 408
Size of farm--total acres.	_____	274	307	237
Size of business--days of work	_____	456	519	402
Feed per acre--value	\$ _____	\$16.13	\$20.32	\$13.38
Percent of tillable land in legumes ^{b/}	_____	23.7	24.1	24.2
Crop system rating - % of average.	_____	100	101	99
Crop yields - % of av. on similar soil	_____	100	101	96
Livestock efficiency - % of average.	_____	100	102	95
Labor costs - % of average	_____	100	90	113
Horse and machinery costs - % of average	_____	94	90	93
Miscellaneous costs - % of average	_____	100	102	102
Price of products sold - % of average.	_____	100	101	96
Value per acre of improved land.	\$ _____	\$ 129	\$ 135	\$ 119
Gross earnings per man - % of average.	_____	100	145	73
Percent of gross earnings from:				
Cattle	_____	27.9	33.8	19.4
Hogs	_____	28.0	32.0	26.9
Sheep.	_____	1.6	1.0	1.4
Poultry and eggs	_____	3.5	1.8	4.2
Dairy products	_____	7.7	1.5	15.0
Grain.	_____	18.5	19.1	19.5
AAA payments	_____	8.8	7.8	8.7
Miscellaneous.	_____	4.0	3.0	4.9
Rented farms - number		104	20	20
Size of farm - total acres	_____	266	289	240
Tenant's returns for labor, cap., mgt.	\$ _____	\$3 383	\$4 002	\$2 361
Tenant's labor and management earnings	_____	2 981	3 572	2 055
Landlord's returns for capital	_____	2 678	3 777	1 842
Landlord's rate earned on investment	_____ %	6.4%	7.6%	5.6%

a/ The farms were grouped according to their percent of average gross earnings per man. See discussion on page 17.

b/ Only biennial and perennial legumes alone or in mixtures were included.

Chart 7.--Crop System Rating as Related to the Rate Earned on the Total Farm Investment^{a/}



a/ Each sign (+) represents a farm, as the farms were distributed from the left to the right of the chart according to the percent of average crop-system rating, and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 14, page 31).
- ② - Average of 40 most profitable farms (Table 3, page 6).
- ③ - Average of 40 least profitable farms (Table 3, page 6).
- ④ - Average of 40 farms with lowest crop-system ratings (Table 14, page 31).
- ⑤ - Average of 40 farms with highest crop-system ratings (Table 14, page 31).

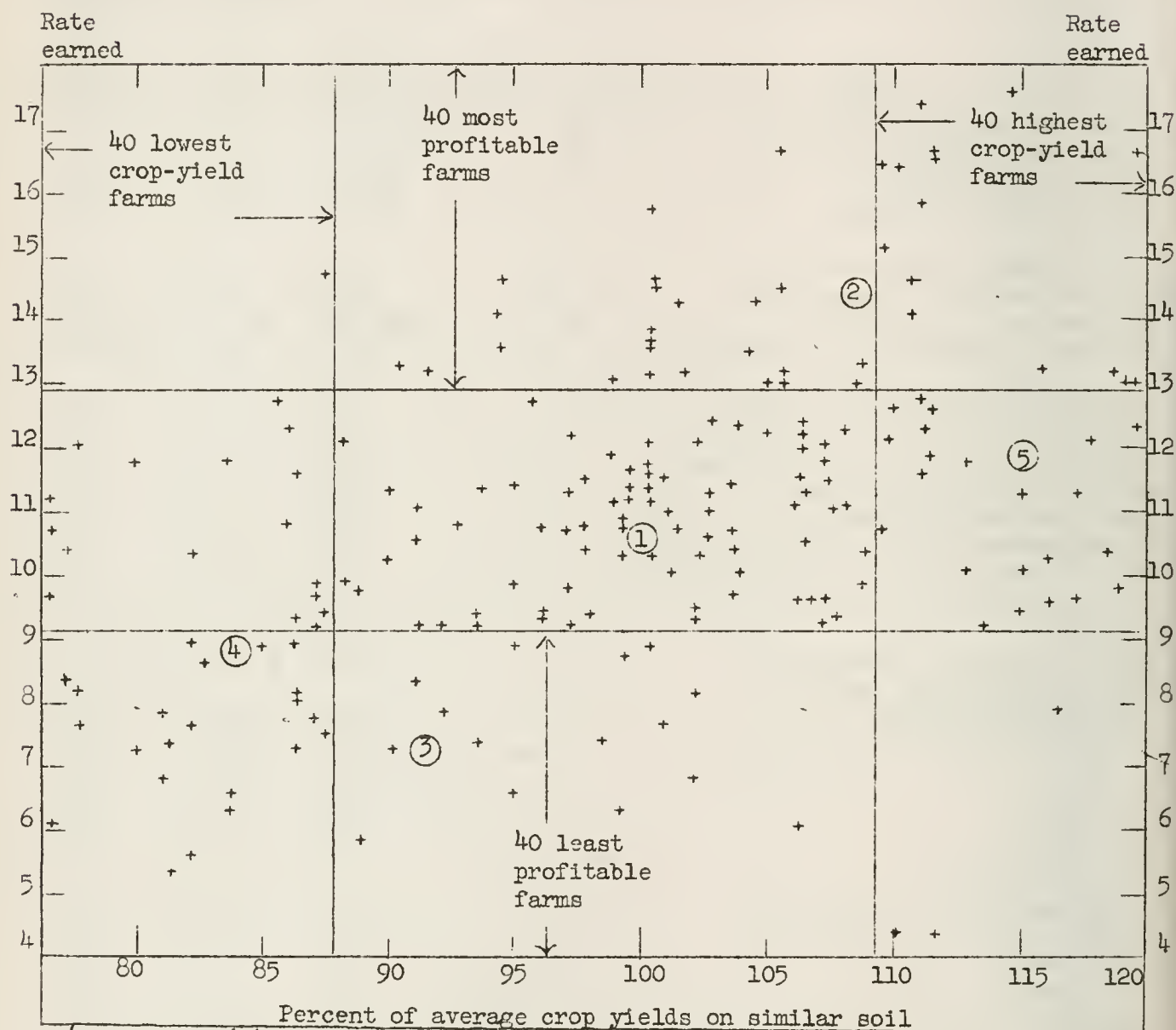
Table 14.--Crop System Rating as Related to Net Farm Earnings
and Other Factors^{a/}

Item	Your farm	Average of all 200 farms	40 farms with high crop rating	40 farms with low crop rating
Rate earned on investment	%	10.6%	10.7%	10.6%
Labor and management earnings	\$	\$3 560	\$3 812	\$3 281
Labor earnings per man.		2 205	2 287	2 140
Gross earnings per acre		34.04	41.66	33.33
Gross earnings per man.		4 685	5 314	4 684
Size of farm - total acres.		274	271	259
Size of business - days of work		456	523	417
Feed per acre - value	\$	\$16.13	\$20.96	\$15.28
Percent of tillable land in legumes ^{b/}		23.7	28.5	20.8
Crop system rating - % of average		100	108	92
Crop yields - % of av. on similar soil.		100	98	101
Livestock efficiency - % of average		100	100	97
Labor costs - % of average.		100	103	100
Horse and machinery costs - % of average.		94	94	88
Miscellaneous costs - percent of average.		100	103	94
Price of products sold - % of average		100	102	98
Value of improved land per acre	\$	\$ 129	\$ 138	\$ 125
Percent of tillable land in:				
<u>Grain crops--total</u>	()	(66.5)	(64.7)	(65.4)
Corn--includes silage corn.		36.6	37.3	35.5
Oats.		20.7	18.6	23.0
Wheat		1.9	2.5	1.6
Barley.		1.3	1.6	1.2
Soybeans.		6.0	4.7	4.0
Miscellaneous		--	--	.1
<u>Hay and pasture crops--total</u>	()	(26.6)	(29.6)	(27.1)
Bluegrass		1.4	1.3	1.8
Timothy		1.2	.5	3.6
Clover and mixed.		7.5	2.4	12.5
Alfalfa		7.8	13.2	1.9
Sweet clover.		6.3	6.6	3.8
Soybeans.		1.2	.7	1.7
Miscellaneous		1.2	4.9	1.8
<u>Other crops</u>	()	(6.9)	(5.7)	(7.5)
All annual legumes.		7.9	6.1	6.5
Crops following 1st year sweet clover		4.1	2.8	3.1
Rented farms - number		104	16	24
Size of farm - total acres.		266	255	274
Tenant's returns for labor, cap., mgt..	\$	\$3 383	\$3 719	\$3 507
Tenant's labor and management earnings.		2 981	3 247	3 106
Landlord's returns for capital.		2 678	2 672	2 385
Landlord's rate earned on investment.	%	6.4%	6.1%	5.7%

^{a/} The farms were grouped according to the percent of the average crop system rating. See discussion on page 18.

^{b/} Only biennial or perennial legumes alone or in mixtures were included.

Chart 8.--Crop Yields as Related to the Rate Earned on the Total Farm Investment^{a/}



a/ Each sign (+) represents a farm, as the farms were distributed from the left to the right of the chart according to the percent of average crop yields on similar soil, and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 15, page 33).
- ② - Average of 40 most profitable farms (Table 3, page 6).
- ③ - Average of 40 least profitable farms (Table 3, page 6).
- ④ - Average of 40 lowest crop-yield farms (Table 15, page 33).
- ⑤ - Average of 40 highest crop-yield farms (Table 15, page 33).

Table 15.--Crop Yields as Related to Net Farm Earnings and Other Factors^{a/}

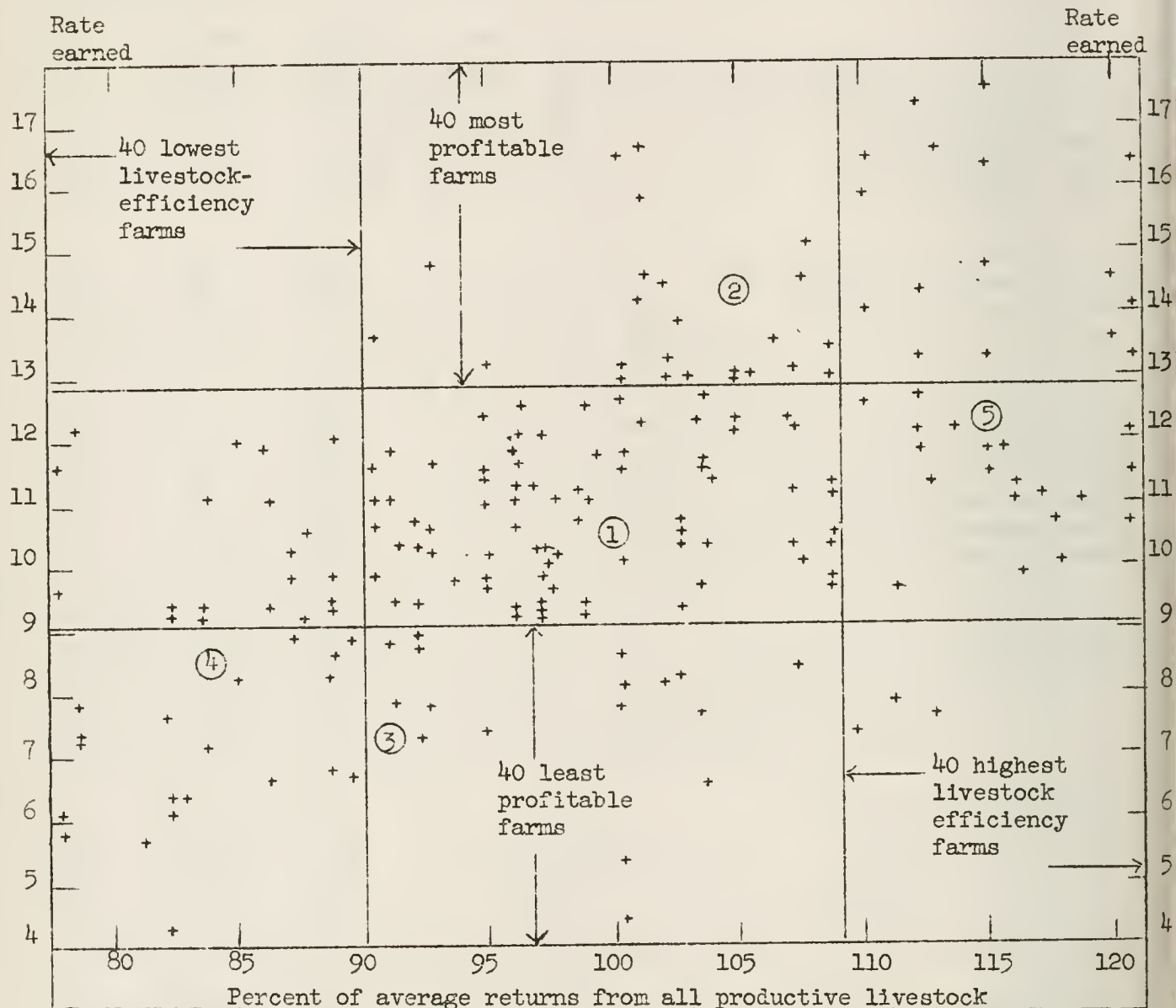
Item	Your farm	Average of all 200 farms	40 farms with high crop index	40 farms with low crop index
Rate earned on investment	%	10.6%	11.8%	8.9%
Labor and management earnings	\$	\$3 560	\$3 893	\$2 819
Labor earnings per man.		2 205	2 386	1 776
Gross earnings per acre		34.04	43.52	29.19
Gross earnings per man.		4 685	5 088	4 513
Size of farm - total acres.		274	229	322
Size of business - days of work		456	437	489
Feed per acre - value	\$	\$16.13	\$21.92	\$14.18
Percent of tillable land in legumes ^{b/}		23.7	25.3	22.7
Crop system rating - % of average		100	99	100
Crop yields - % of av. on similar soil.		100	115	84
Livestock efficiency - % of average		100	102	96
Labor costs - % of average.		100	105	97
Horse and machinery costs - % of average.		94	93	86
Miscellaneous costs - % of average.		100	110	95
Price of products sold - % of average		100	101	99
Value of improved land per acre	\$	\$ 129	\$ 128	\$ 128
Crop yields: Corn - bushels per acre		68.5	78.9	57.0
Oats - bushels per acre		54.1	61.7	46.5
Wheat - bushels per acre.		25.6	31.6	20.6
Soybeans - bushels per acre		23.8	27.9	20.9
Percent of average yields on similar soil: Corn		100	113	82
Oats		100	114	86
Wheat.		100	120	78
Soybeans		100	119	89
Rented farms - number		104	19	23
Size of farm - total acres.		266	206	333
Tenant's returns for labor, cap., mgt..	\$	\$3 383	\$3 376	\$3 108
Tenant's labor and management earnings.		2 981	3 041	2 666
Landlord's returns for capital.		2 678	2 858	2 478
Landlord's rate earned on investment.	%	6.4%	7.9%	5.2%

^{a/} The farms were grouped according to the percent of average yields on similar soil. See discussion on page 18.

^{b/} Only biennial and perennial legumes alone or in mixtures were included.

34.

Chart 9.--Livestock Efficiency as Related to the Rate Earned on the Total Farm Investment^{a/}



a/ Each sign (+) represents a farm, as the farms were distributed from the left to the right of the chart according to the percent of average returns from all productive livestock, and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 16, page 35).
- ② - Average of 40 most profitable farms (Table 3, page 7).
- ③ - Average of 40 least profitable farms (Table 3, page 7).
- ④ - Average of 40 farms with the lowest livestock efficiency (Table 16, page 35).
- ⑤ - Average of 40 farms with the highest livestock efficiency (Table 16, page 35).

Table 16.--Livestock Efficiency as Related to Net Farm Earnings and Other Factors^{a/}

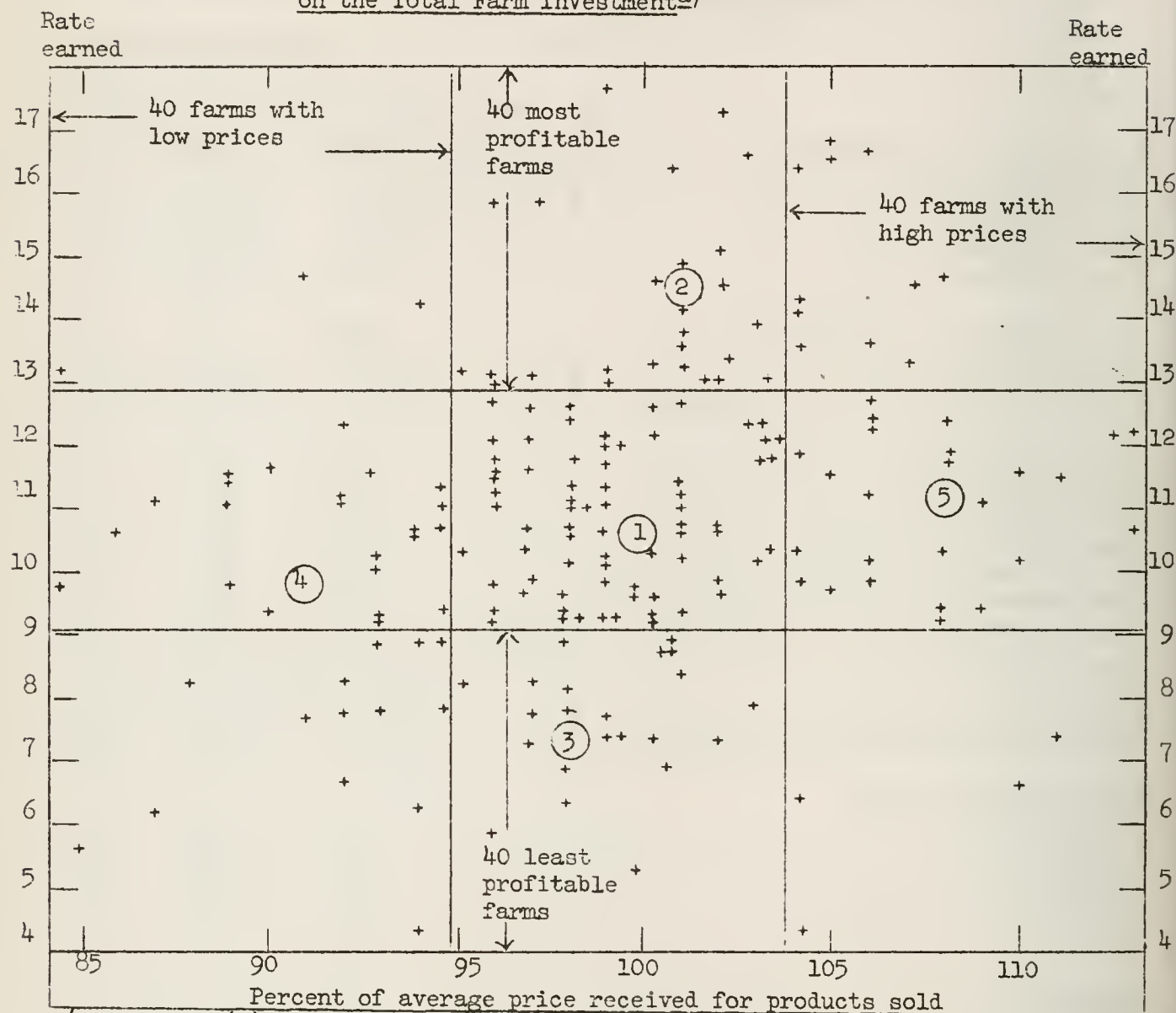
Item	Your farm	Average of all 200 farms	40 farms with high livestock efficiency	40 farms with low livestock efficiency
Rate earned on investment	_____ %	10.6%	12.3%	8.5%
Labor and management earnings	\$ _____	\$3 560	\$4 485	\$2 553
Labor earnings per man.	_____	2 205	2 626	1 723
Gross earnings per acre	_____	34.04	37.73	29.49
Gross earnings per man.	_____	4 685	5 280	4 447
Size of farm - total acres.	_____	274	283	305
Size of business - days of work	_____	456	439	471
Feed per acre - value	\$ _____	\$16.13	\$13.72	\$13.99
Percent of tillable land in legumes ^{b/}	_____	23.7	24.5	21.9
Crop system rating.	_____	100	101	99
Crop yields - % of av. on similar soil.	_____	100	101	95
Livestock efficiency - % of average	_____	100	115	84
Labor costs - % of average.	_____	100	105	102
Horse and machinery costs - % of average.	_____	94	94	94
Miscellaneous costs - % of average.	_____	100	106	99
Price of products sold - % of average	_____	100	103	97
Returns from all productive livestock	\$ _____	\$6 644	\$6 781	\$5 550
Returns at average rates per \$100 feed.	_____	6 644	5 904	6 589
<u>Returns per \$100 feed</u>				
Cattle.	_____	143	167	125
Hogs.	_____	158	185	136
Sheep	_____	128	151	107
Poultry	_____	185	204	165
All productive livestock.	_____	150	175	130
<u>Livestock efficiency - % of av. returns</u>				
Cattle.	_____	100	115	83
Hogs.	_____	100	116	87
Sheep.	_____	100	108	81
Poultry	_____	100	107	86
Rented farms - number	_____	104	25	20
Size of farm - total acres.	_____	266	268	283
Tenant's returns for labor, cap., mgt.. . . .	\$ _____	\$3 383	\$3 929	\$2 892
Tenant's labor and management earnings.	_____	2 981	3 538	2 479
Landlord's returns for capital.	_____	2 678	3 185	2 315
Landlord's rate earned on investment.	_____ %	6.4%	7.2%	5.3%

^{a/} The farms were grouped according to the percent of average livestock efficiency. See discussion on page 19.

^{b/} Only biennial and perennial legumes alone or in mixtures were included.

36.

Chart 10.--Prices of Products Sold as Related to the Rate Earned
on the Total Farm Investment^{a/}



a/ Each sign (+) represents a farm, as the farms were distributed from the left to the right of the chart according to the percent of average price of the products sold, and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 17, page 37).
- ② - Average of 40 most profitable farms (Table 5, page 7).
- ③ - Average of 40 least profitable farms (Table 3, page 7).
- ④ - Average of 40 farms which received the lowest prices (Table 17, page 37).
- ⑤ - Average of 40 farms which received the highest prices (Table 17, page 37).

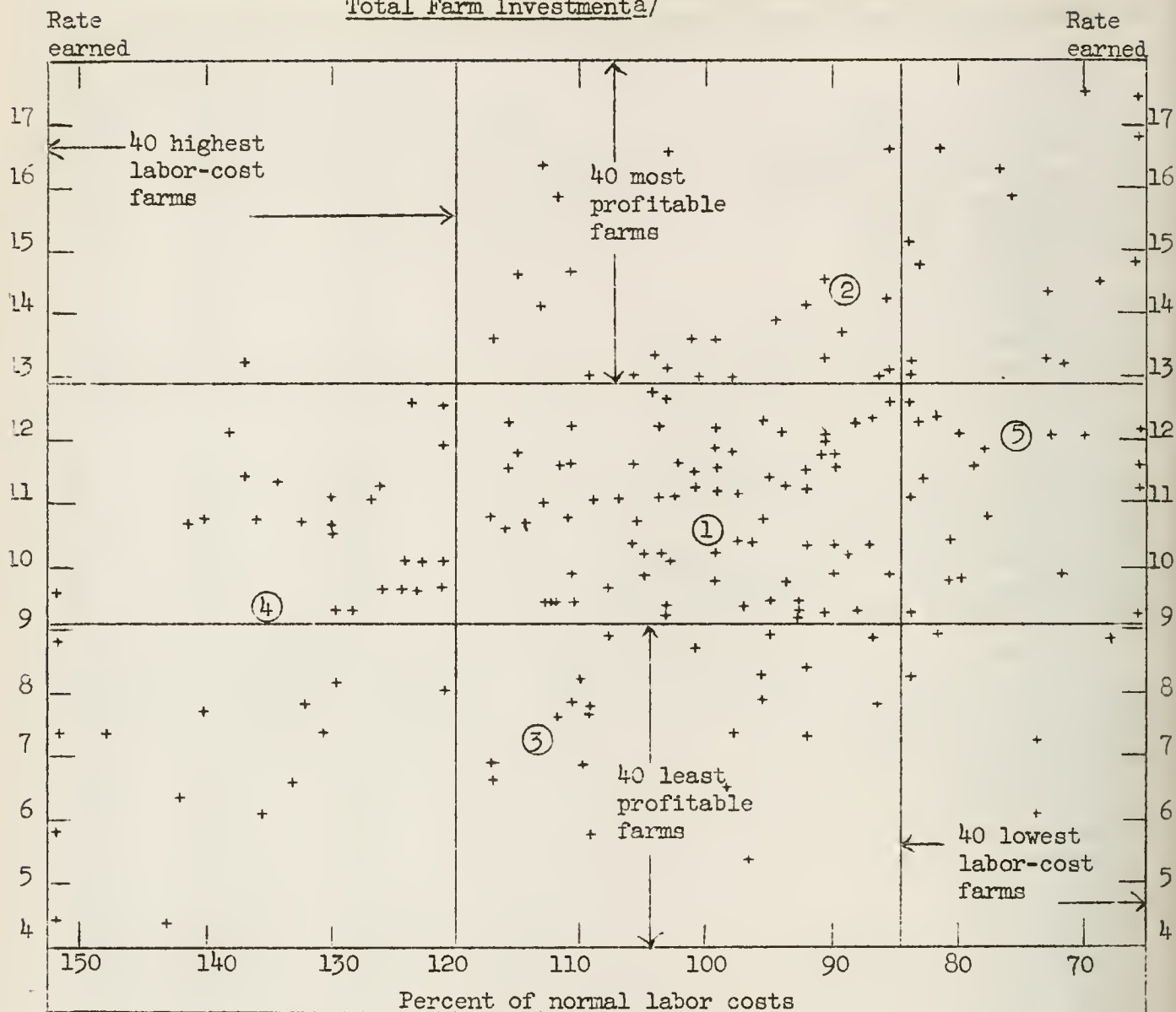
Table 17.--Prices of Products Sold as Related to Net Farm Earnings and Other Factors^{a/}

Item	Your farm	Average of all 200 farms	40 farms with high average prices	40 farms with low average prices
Rate earned on investment	%	10.6%	11.1%	9.8%
Labor and management earnings	\$	\$3 560	\$4 219	\$2 761
Labor earnings per man.		2 205	2 417	1 851
Gross earnings per acre		34.04	43.01	29.19
Gross earnings per man.		4 685	5 404	4 208
Size of farm - total acres.		274	276	268
Size of business - days of work		456	536	403
Feed per acre - value	\$	\$16.13	\$20.79	\$12.41
Percent of tillable land in legumes ^{b/}		23.7	25.6	21.2
Crop system rating - % of average		100	102	98
Crop yields - % of av. on similar soil.		100	103	97
Livestock efficiency - % of average		100	102	95
Labor costs - % of average.		100	102	101
Horse and machinery costs - % of average.		94	94	93
Miscellaneous costs - % of average.		100	110	94
Price of products sold - % of average		100	108	91
Value of following products sold.	\$	\$10 724	\$12 972	\$8 197
Value if sold at average prices		10 724	12 056	9 009
<u>Amounts of products sold</u>				
Corn - bushels.		2 520	2 282	2 387
Oats - bushels.		903	715	972
Wheat - bushels		86	136	41
Soybeans - bushels.		285	209	327
Beef - pounds		45 957	55 475	37 959
Pork - pounds		34 918	43 219	26 452
Mutton and wool - pounds.		4 459	1 512	2 078
Milk - pounds produced.		54 305	71 704	50 273
Eggs - dozens		984	1 135	1 015
<u>Prices received</u>				
Corn - per bushel	\$	\$.59	\$.63	\$.54
Oats - per bushel		.32	.34	.31
Wheat - per bushel.		.80	.82	.79
Soybeans - per bushel		.97	.97	.91
Beef - per 100 pounds		10.13	10.78	8.98
Pork - per 100 pounds		7.14	7.43	6.85
Mutton and wool - per 100 pounds.		9.33	10.63	9.51
Milk - per 100 pounds		1.58	1.91	1.32
Eggs - per dozen.		.21	.22	.19
<u>Rented farms</u> - number		104	21	22
Size of farm - total acres.		266	245	243
Tenant's returns for labor, cap., mgt..	\$	\$3 383	\$3 964	\$2 442
Tenant's labor and management earnings.		2 981	3 494	2 108
Landlord's returns for capital.		2 678	3 158	2 125
Landlord's rate earned on investment.	%	6.4%	6.9%	5.9%

a/ The farms were grouped according to the percent of average price of products sold. See the discussion on page 19.

b/ Only biennial and perennial legumes alone or in mixtures were included.

Chart 11.--Labor Cost as Related to the Rate Earned on the Total Farm Investment^{a/}



a/ Each sign (+) represents a farm, as the farms were distributed from the right to the left of the chart according to the percent of normal labor costs, and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 18, page 39).
- ② - Average of 40 most profitable farms (Table 3, page 8).
- ③ - Average of 40 least profitable farms (Table 3, page 8).
- ④ - Average of 40 farms with the highest labor costs (Table 18, page 39).
- ⑤ - Average of 40 farms with the lowest labor costs (Table 18, page 39).

Table 18.--Labor Costs as Related to Net Farm Earnings and Other Factors^{a/}

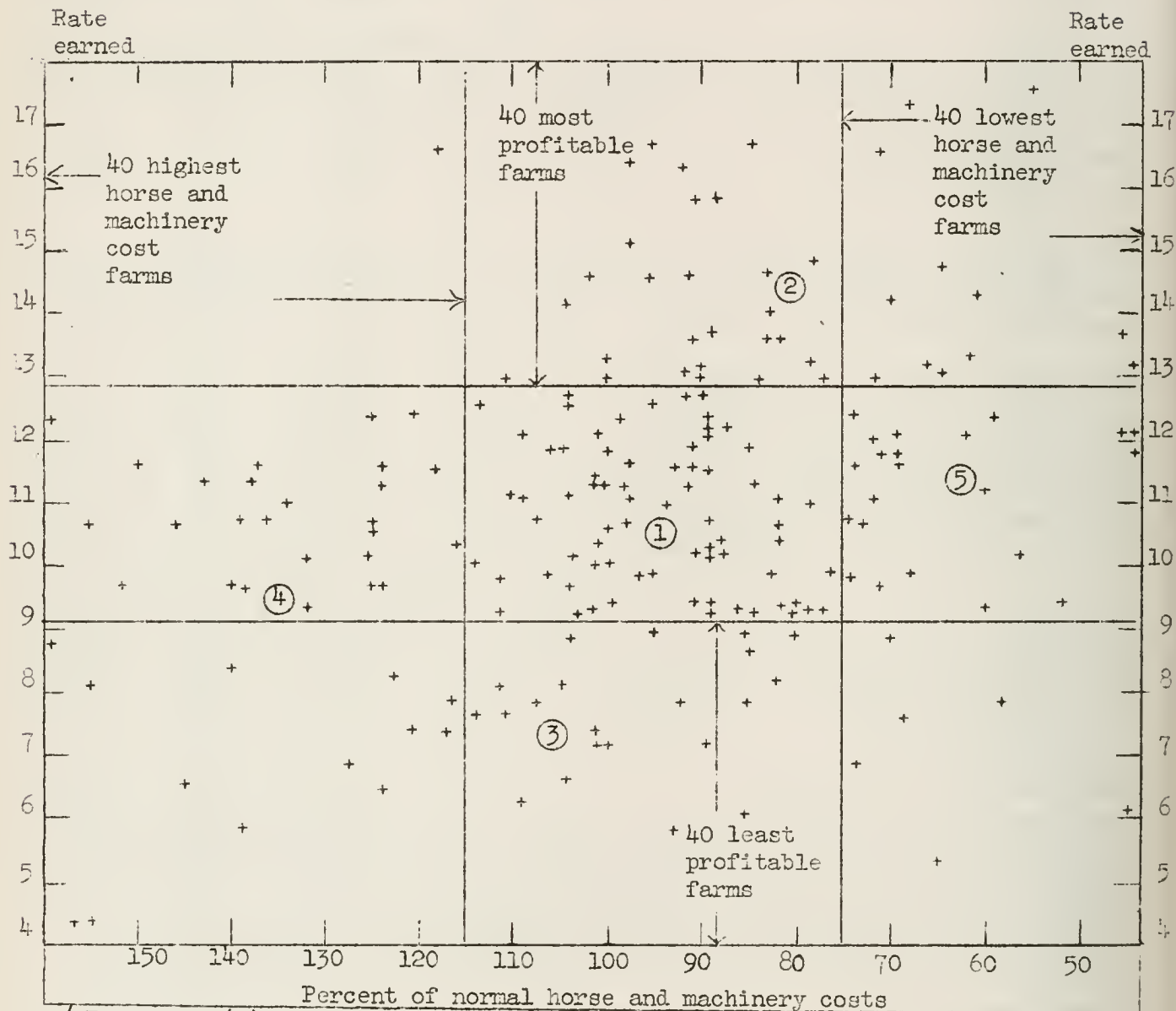
Item	Your farm	Average of all 200 farms	40 farms with low labor costs	40 farms with high labor costs
Rate earned on investment	%	10.6%	12.1%	9.2%
Labor and management earnings	\$	\$3 560	\$3 772	\$2 983
Labor earnings per man.		2 205	2 784	1 798
Gross earnings per acre		34.04	35.33	35.66
Gross earnings per man.		4 685	5 925	4 287
Size of farm - total acres.		274	256	280
Size of business - days of work		456	456	411
Feed per acre - value	\$	\$16.13	\$17.29	\$14.83
Percent of tillable land in legumes ^{b/}		23.7	23.4	24.7
Crop system rating - % of average		100	100	101
Crop yields - % of av. on similar soil.		100	97	101
Livestock efficiency - % of average		100	98	100
Labor costs - % of average.		100	76	135
Horse and machinery costs - % of average.		94	79	118
Miscellaneous costs - % of average.		100	87	120
Price of products sold - % of average		100	99	101
Total labor cost.	\$	\$1 346	\$ 995	\$1 653
Total labor cost at normal rate		1 346	1 316	1 222
Days of work on crops		165	156	163
Days of work on livestock		291	300	248
Days of work per acre		1.66	1.93	1.46
Average number of men working		1.99	1.52	2.32
Total days of work per man.		229	299	177
Value per month of hired and home labor	\$	\$ 56	\$ 54	\$ 59
Percent of years with tractors.		100	98	100
Percent of years with tractor cultivator.		94	94	88
Percent of years with trucks.		54	53	70
Rented farms - number		104	24	13
Size of farm - total acres.		266	236	266
Tenant's returns for labor, cap., mgt..	\$	\$3 383	\$3 138	\$3 416
Tenant's labor and management earnings.		2 981	2 808	3 016
Landlord's returns for capital.		2 678	2 295	2 615
Landlord's rate earned on investment.	%	6.4%	6.8%	6.0%

^{a/} The farms were grouped according to the percent of normal labor costs. See the discussion on page 20.

^{b/} Only biennial and perennial legumes alone or in mixtures were included.

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Chart 12.--Horse and Machinery Costs as Related to the Rate Earned on the Total Farm Investment^{a/}



a/ Each sign (+) represents a farm, as the farms were distributed from the right to the left of the chart according to the percent of normal horse and machinery costs, and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 19, page 41).
- ② - Average of 40 most profitable farms (Table 3, page 8).
- ③ - Average of 40 least profitable farms (Table 3, page 8).
- ④ - Average of 40 farms with the highest horse and machinery costs (Table 19, page 41).
- ⑤ - Average of 40 farms with the lowest horse and machinery costs (Table 19, page 41).

Table 19.--Horse and Machinery Costs as Related to Net Farm
Earnings and Other Factors^{a/}

Item	Your farm	Average of all 200 farms	40 farms with low horse and machinery costs	40 farms with high horse and machinery costs
Rate earned on investment	_____ %	10.6%	11.3%	9.4%
Labor and management earnings	\$ _____	\$3 560	\$4 235	\$2 890
Labor earnings per man.	_____	2 205	2 333	1 920
Gross earnings per acre	_____	34.04	34.47	36.30
Gross earnings per man.	_____	4 685	4 960	4 772
Size of farm - total acres.	_____	274	319	257
Size of business - days of work	_____	456	578	379
Feed per acre - value	\$ _____	\$16.13	\$17.50	\$14.59
Percent of tillable land in legumes ^{b/}	_____	23.7	23.0	22.9
Crop system rating - % of average	_____	100	99	101
Crop yields - % of av. on similar soil.	_____	100	96	99
Livestock efficiency - % of average	_____	100	100	100
Labor costs - % of average.	_____	100	92	122
Horse and machinery costs - % of average.	_____	94	63	135
Miscellaneous costs - % of average.	_____	100	86	120
Price of products sold - % of average	_____	100	100	101
Total horse and machinery cost.	\$ _____	\$1 125	\$1 002	\$1 355
Total cost at the normal rate	_____	1 198	1 594	1 005
Percent of years with tractors.	_____	100	100	100
Percent of years with tractor cultivator.	_____	94	91	94
Percent of years with trucks.	_____	54	52	54
Number of work horses	_____	2.6	3.0	2.6
Feed cost per work horse.	\$ _____	\$ 44	\$ 45	\$ 42
Increase in value of horses	_____	-21	-11	-33
Income from use of machinery ^{c/}	_____	112	241	39
Expenses and net decreases--horse feed.	_____	115	136	108
Auto - only farms with autos.	_____	138	125	162
Truck - only farms with trucks.	_____	109	86	118
Tractor - only farms with tractors.	_____	319	300	402
Other machinery - all farms	_____	475	378	570
All machinery - all farms	_____	851	730	1 052
Horse feed and depreciation - all farms	_____	136	147	141
Rented farms - number	_____	104	24	20
Size of farm - total acres.	_____	266	299	258
Tenant's returns for labor, cap., mgt.. . . .	\$ _____	\$3 383	\$3 705	\$3 304
Tenant's labor and management earnings.	_____	2 981	3 266	2 857
Landlord's returns for capital.	_____	2 678	2 824	2 545
Landlord's rate earned on investment.	_____ %	6.4%	6.4%	6.1%

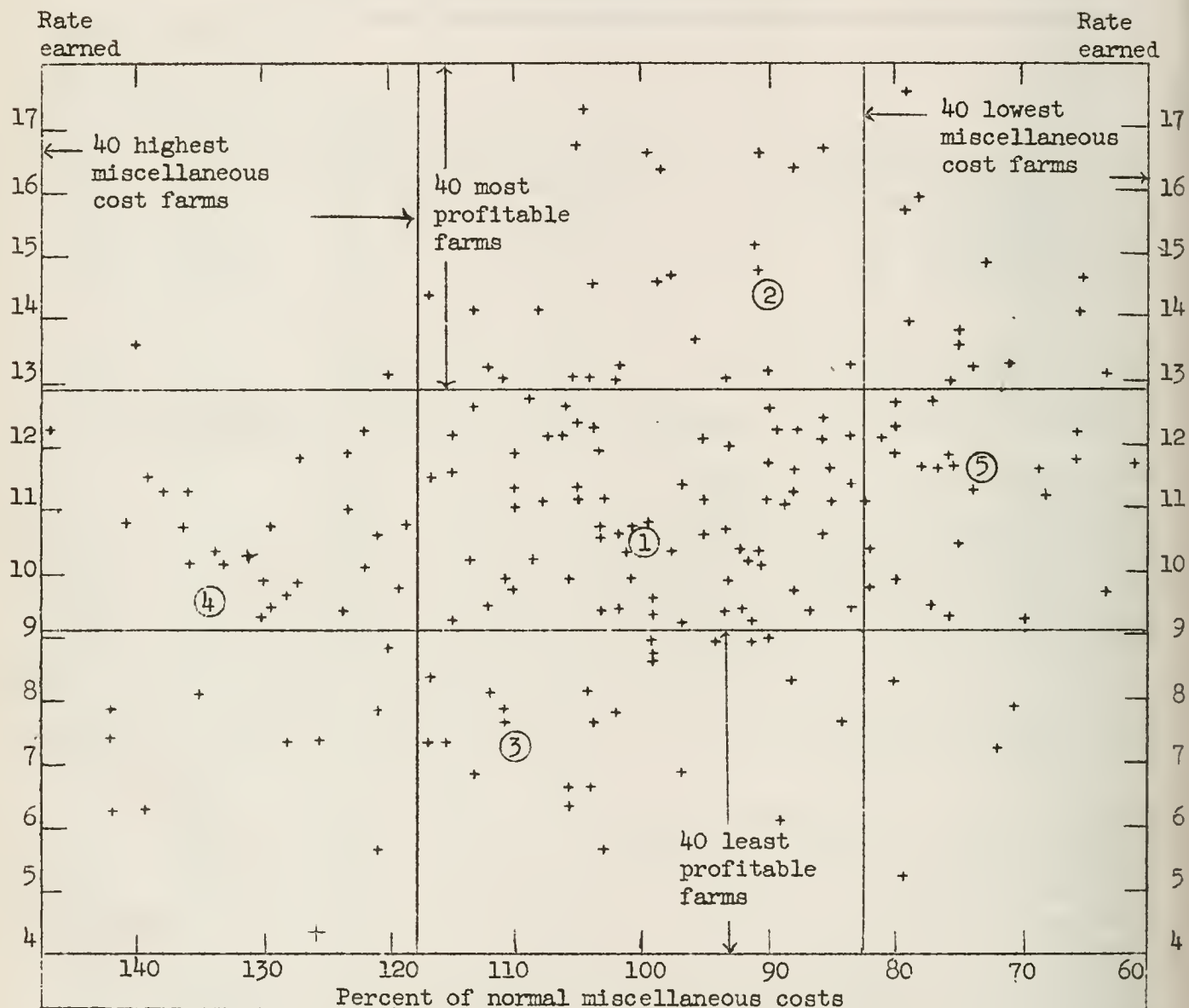
^{a/} The farms were grouped according to the percent of normal horse and machinery costs. See the discussion on page 20.

^{b/} Only biennial and perennial legumes alone or in mixtures were included.

^{c/} Includes use of automobile.

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Chart 13.--Miscellaneous Costs as Related to the Rate Earned on the Total Farm Investment^{a/}



^{a/} Each sign (+) represents a farm, as the farms were distributed from the right to the left of the chart according to the percent of normal miscellaneous costs, and from the bottom to the top according to the rate earned on the total farm investment.

- ① - Average of all 200 farms (Table 20, page 43).
- ② - Average of 40 most profitable farms (Table 3, page 8).
- ③ - Average of 40 least profitable farms (Table 3, page 8).
- ④ - Average of 40 farms with the highest miscellaneous costs (Table 20, page 43).
- ⑤ - Average of 40 farms with the lowest miscellaneous costs (Table 20, page 43).

Table 20.--Miscellaneous Costs as Related to Net Farm Earnings
and Other Factors^{a/}

Item	Your farm	Average of all 200 farms	40 Farms with low miscel- laneous expenses	40 farms with high miscel- laneous expenses
Rate earned on investment	%	10.6%	11.7%	9.5%
Labor and management earnings	\$	\$3 560	\$3 897	\$3 059
Labor earnings per man.		2 205	2 348	1 974
Gross earnings per acre		34.04	32.31	37.55
Gross earnings per man.		4 685	4 730	4 813
Size of farm - total acres.		274	291	261
Size of business - days of work		456	497	406
Feed per acre - value	\$	\$16.13	\$13.73	\$16.64
Percent of tillable land in legumes ^{b/}		23.7	21.2	23.9
Crop system rating - % of average		100	99	101
Crop yields - % of av. on similar soil.		100	97	103
Livestock efficiency - % of average		100	97	99
Labor costs - % of average.		100	91	120
Horse and machinery costs - % of average.		94	78	115
Miscellaneous costs - % of average.		100	73	134
Price of products sold - % of average		100	97	101
Total miscellaneous cost.	\$	\$1 258	\$1 015	\$1 526
Cost at normal rate		1 258	1 387	1 135
Miscellaneous costs per acre				
Farm improvements		1.65	1.14	2.35
Crop expense.		.96	.74	1.19
Livestock expense		.35	.24	.51
Taxes		1.38	1.15	1.50
Miscellaneous		.25	.21	.30
Rented farms - number		104	20	14
Size of farm - total acres.		266	290	246
Tenant's returns for labor, cap., mgt.. \$		\$3 383	\$3 552	\$3 265
Tenant's labor and management earnings.		2 981	3 142	2 903
Landlord's returns for capital.		2 678	2 676	2 588
Landlord's rate earned on investment.	%	6.4%	6.7%	6.2%

^{a/} Farms were grouped according to the percent of normal miscellaneous expenses. Miscellaneous expenses as used here include farm improvements, livestock expenses, crop expenses, taxes and miscellaneous expenses. See the discussion on page 20.

^{b/} Only biennial and perennial legumes alone or in mixtures were included.

Organization Factors

Source of income. The relative profitableness of different types of farms is dependent upon the relative prices of the products sold. Hog farms, that is, farms on which 40 percent or more of the income came from hogs and less than 40 percent from any other one source, proved more profitable than any other type of farm (Chart 15, page 46, and Table 21, page 47). Grain farms on which 60 percent or more of the income came from grain ranked next to the hog farms in returning good net earnings. Beef cattle farms ranked the lowest in earning power during the three years 1939, 1940, and 1941, in this area. There were too few dairy farms to give an adequate idea of their profitableness compared with other farms.

A similar report for 160 farms in western Illinois for the years 1938, 1939, and 1940, shows that beef cattle farms were more profitable than either hog or grain farms in that area during that period. This, too, was due to the price advantages of cattle during that period.

Chart 14.--Monthly Price Indices of Corn, Beef Cattle, Hogs, and Butterfat.
Farm prices for the years 1939, 1940, and 1941 were obtained from the Illinois Cooperative Crop Reporting Service

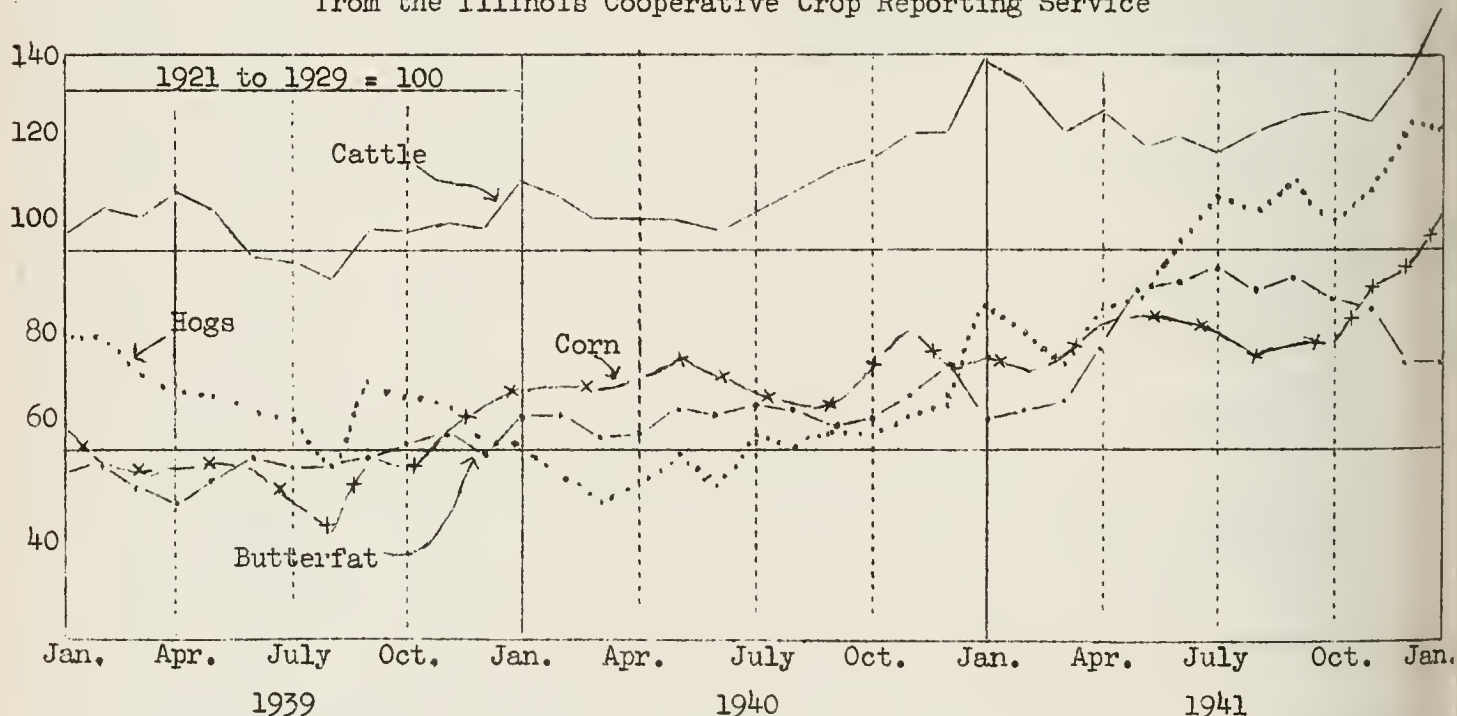


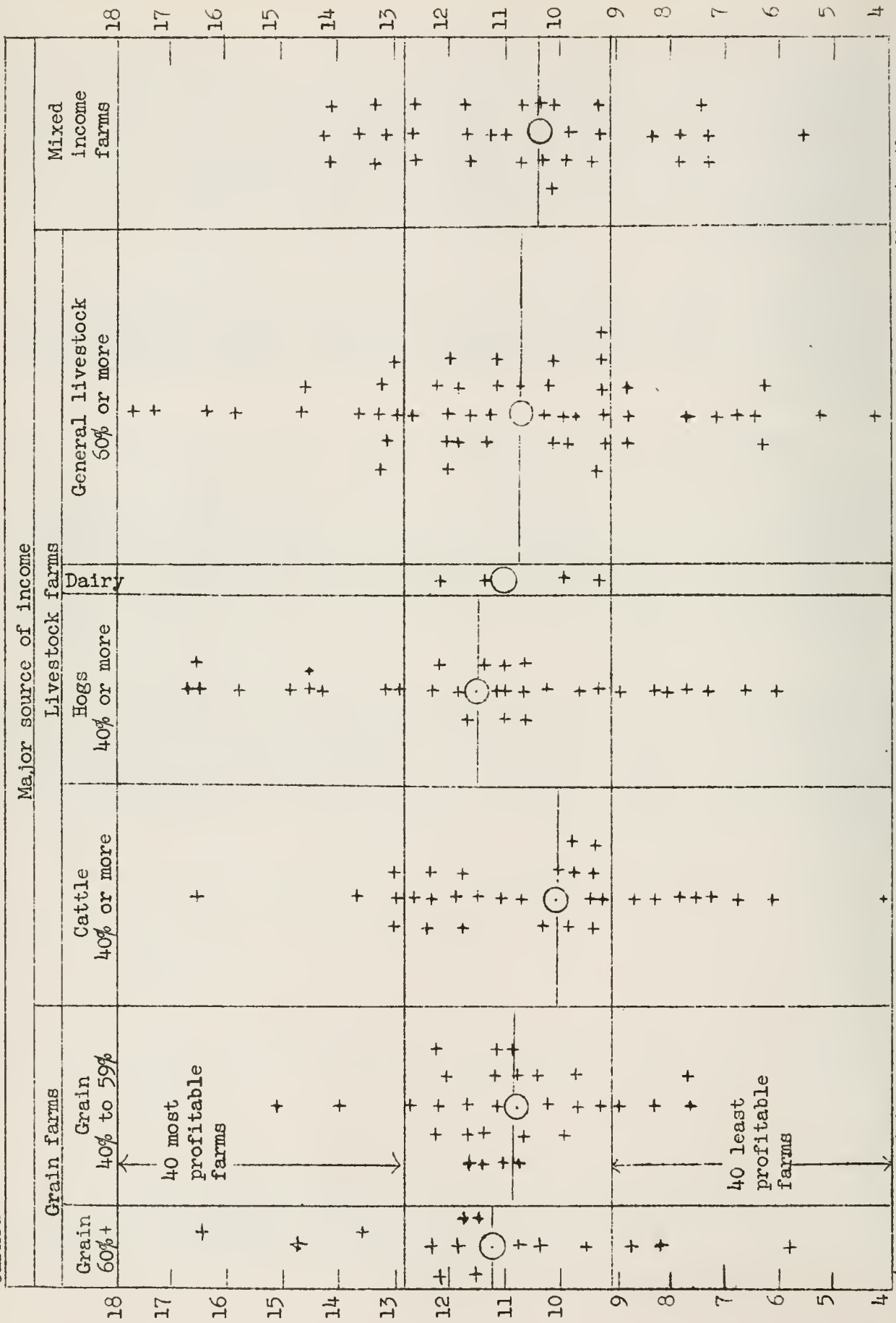
Chart 15, page 46 shows that some of the 40 most profitable and some of the 40 least profitable farms were found in each source-of-income group of farms. The profitable operation of corn-belt farms is much more dependent upon efficiency than upon the particular type of farming followed.

Size of farm. Farms of about 160 acres proved more profitable, measured by the rate earned on the farm investment, than other size groups (Chart 16, page 48, and Table 22, page 49). The average earnings of farms of 140 acres to 300 acres were higher than those of the smaller or larger sized groups. However, the operators' labor and management earnings were larger on the larger farms. The average labor earnings per man were small on farms under 140 acres but were about the same on the different sized groups over 140 acres. The gross earnings per acre were larger on the smaller farms, and the gross earnings per man were larger on the larger farms.

The advantage of the medium sized farms over the large farms was due largely to their source of income rather than to any greater economy practical in their operation. Most of the hog farms were small to medium in size, while the cattle and grain farms were usually larger. Table 21, page 47, shows that the average size of the hog farms was 214 acres; grain farms, 339 acres; and cattle farms, 341 acres.

Intensity of business. Intensity of farm business is measured by the days of work per acre of the farm required to do the work on crops and livestock. On corn-belt farms intensity of business is obtained by increasing the amount of livestock. Table 23, page 51, indicates that farms which require 1.25 days or less of work per acre on crops and livestock are classified as grain farms (40 percent or more of the gross earnings from grain). Farms that require from 1.25 to 2.25 days of work per acre are usually general livestock, hog, or cattle farms and those which require 2.25 days or more of work produce relatively large amounts of dairy and poultry products.

The rate earned on the investment increased as the intensity of the business increased except for a few large grain farms that were operated on a very extensive basis and had good net earnings (Chart 17, page 50, and Table 23, page 51). The gross earnings per acre were more than twice as large on the farms that required 2.50 or more days of labor per acre than they were on farms that required less than 1.25 days of labor per acre. Gross earnings per man were largest on the few large grain farms and smallest on the farms of medium intensity.

Chart 15.--Source of Income as Related to the Net Farm Earnings^{a/}Rate
earnedRate
earned

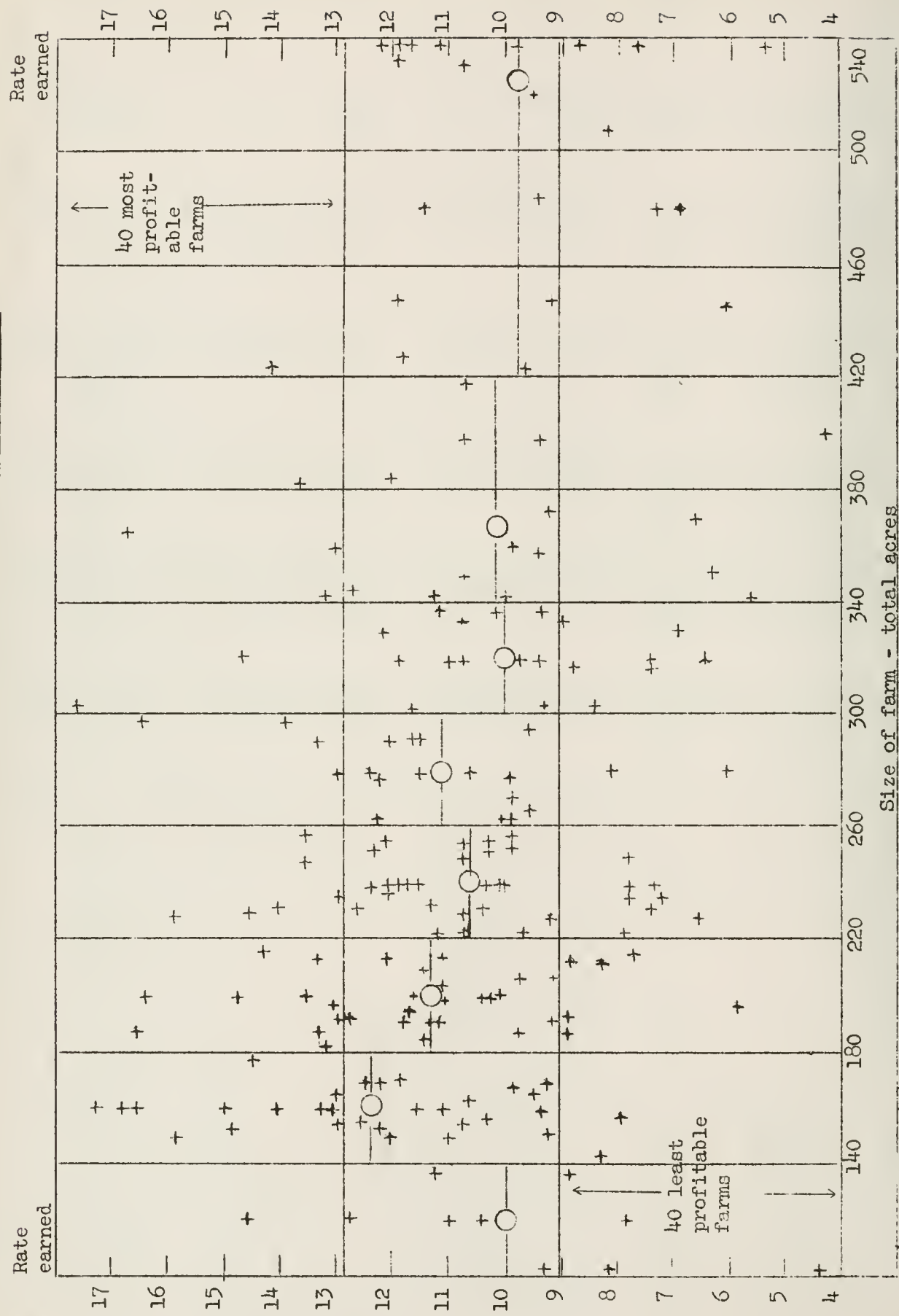
a/ Each sign (+) represents a farm, as farms were distributed into the seven columns according to the sources of income named at the tops of the columns and from the bottom to the top of the chart according to the rate earned on the total farm investment. The signs (---○---) represent the averages of groups of farms. See Table 21, page 47 and the discussion on page 44.

Item	Your farm	Grain farms			Livestock farms			
		60% or more	40% to 59%	Cattle 40% or more	Hogs 40% or more	Dairy 40% or more	General 60% or more	Mixed income farms ^{a/}
Number of farms	_____ %	15	30	35	32	4	51	33
Rate earned on investment	_____ \$	11.2%	10.8%	10.0%	11.4%	10.9%	10.7%	10.3%
Labor and management earnings	_____ \$	\$4 267	\$3 587	\$4 053	\$3 396	\$3 303	\$3 433	\$3 075
Labor earnings per man.	_____	2 579	2 321	2 177	2 293	1 764	2 100	2 092
Gross earnings per acre	_____	31.10	31.33	36.37	43.50	37.10	35.93	33.89
Gross earnings per man.	_____	5 373	4 886	5 188	5 218	3 733	4 601	4 539
Size of farm - total acres.	_____	339	285	341	214	250	261	244
Size of business - days of work	_____	355	373	545	462	646	494	394
Feed per acre - value	_____ \$	\$ 4.26	\$ 8.48	\$22.37	\$24.63	\$15.43	\$18.06	\$12.13
Percent of tillable land in legumes ^{b/}	_____	15.4	22.2	25.4	25.8	32.7	25.2	23.9
Crop system rating - % of average	_____	98	100	101	101	102	100	99
Crop yields - % of av. on similar soil.	_____	97	98	102	98	108	100	98
Livestock efficiency - % of average	_____	104	94	97	100	105	100	98
Labor costs - % of average.	_____	111	106	107	93	98	98	104
Horse and machinery costs - % of average	_____	114	102	93	90	78	84	96
Miscellaneous costs - % of average.	_____	100	94	105	102	90	96	104
Price of products sold - % of average	_____	98	97	100	100	113	102	100
Percent of gross earnings from:								
Cattle.	_____	8.9	15.0	53.3	19.9	9.9	26.3	16.9
Hogs.	_____	4.7	13.1	22.4	57.6	13.1	30.7	21.6
Sheep	_____	.1	1.2	1.7	1.2	--	2.0	2.2
Poultry and eggs.	_____	2.0	2.8	3.1	2.7	4.2	4.2	4.5
Dairy products.	_____	5.5	5.9	1.9	3.6	52.1	11.8	8.7
Grain	_____	66.8	48.8	5.7	4.5	11.1	13.1	30.9
AAA payments.	_____	8.6	9.8	8.5	6.7	6.6	8.0	10.0
Miscellaneous	_____	3.4	3.4	3.4	3.8	3.0	3.9	5.2
Rented farms - number	_____	8	15	13	16	2	30	20
Size of farm - total acres.	_____	373	226	360	200	247	276	230
Tenant's returns for labor, cap., mgt.	_____ \$	\$3 912	\$3 257	\$3 709	\$3 283	\$3 056	\$3 591	\$2 856
Tenant's labor and management earnings	_____	3 512	2 879	3 182	2 911	2 712	3 148	2 548
Landlord's returns for capital.	_____	4 013	2 210	3 052	2 407	3 374	2 559	2 570
Landlord's rate earned on investment.	_____ %	7.6%	6.0%	5.8%	7.0%	7.6%	6.0%	6.7%

a/ Mixed income farms derive less than 60 percent of their income from livestock and less than 40 percent from any one source.

b/ Only biennial and perennial legumes alone or in mixtures were included.

Chart 16.--Size of Farm as Related to the Net Farm Earnings^{a/}

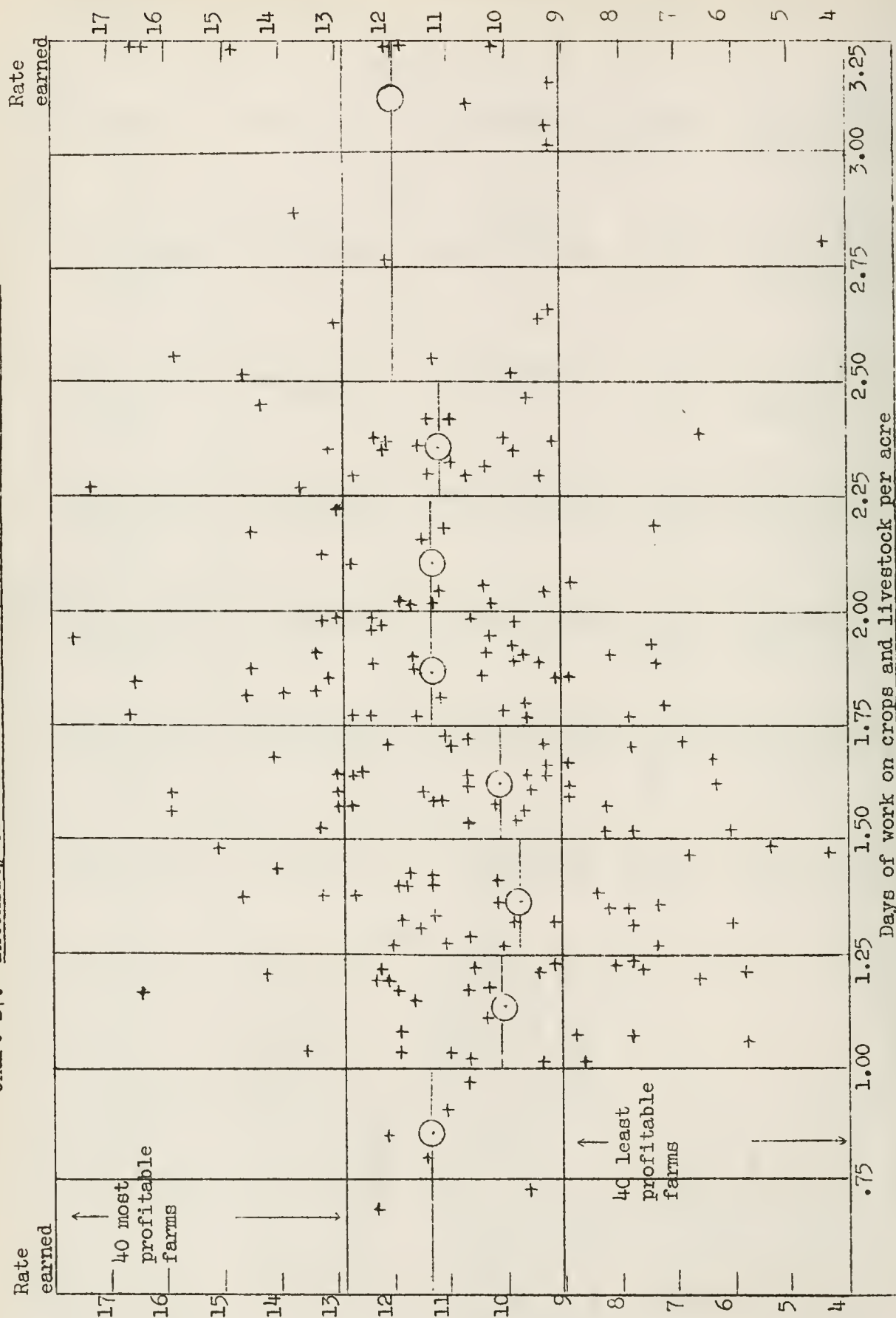


^{a/} Each sign (+) represents a farm, as farms were distributed from the left to the right of the chart according to the size of farm (total acres) and from the bottom to the top according to the rate earned on the total farm investment. The signs (—○—) represent the averages of groups of farms. See Table 22, page 49 and the discussion on page 45.

Table 22.--Size of Farm as Related to Net Farm Earnings and Other Factors^{a/}

Item	Acres per farm							
	Under 140.0	140.0 to 179.9	180.0 to 219.9	220.0 to 259.9	260.0 to 299.9	300.0 to 339.9	340.0 to 419.9	420.0 or more
Number of farms	10	32	36	39	20	22	19	22
Rate earned on investment	10.0%	12.4%	11.3%	10.7%	11.2%	10.0%	10.2%	9.8%
Labor and management earnings	\$1 859	\$3 039	\$3 159	\$3 286	\$4 024	\$3 870	\$4 154	\$4 986
Labor earnings per man.	1 618	2 314	2 255	2 147	2 368	2 111	2 297	2 143
Gross earnings per acre	40.49	46.55	37.80	36.26	39.18	36.28	33.80	27.53
Gross earnings per man.	3 560	4 897	4 689	4 587	5 382	4 922	5 241	5 016
Size of farm - total acres.	114	160	201	238	280	320	367	562
Size of business - days of work	252	384	375	428	437	512	546	716
Feed per acre - value ^{b/}	\$19.46	\$23.38	\$16.30	\$15.13	\$17.77	\$15.70	\$16.56	\$12.76
Percent of tillable land in legumes ^{b/}	28.8	25.5	25.0	24.6	23.2	21.0	22.8	23.4
Crop system rating - % of average	100	101	99	100	99	101	101	100
Crop yields - % of av. on similar soil.	102	105	102	98	103	95	100	94
Livestock efficiency - % of average	100	98	100	100	98	99	98	98
Labor costs - % of average.	112	91	96	102	105	109	107	103
Horse and machinery costs - % of average	106	94	95	91	97	97	94	85
Miscellaneous costs - % of average.	110	101	94	99	106	100	111	92
Price of products sold - % of average	97	101	99	101	99	100	101	99
Percent of land tillable.	92	88	90	90	87	88	84	81
Number of men per farm.	1.3	1.5	1.6	1.9	2.0	2.4	2.4	3.1
Number of work horses per farm.	1.7	2.6	2.6	2.4	2.4	2.9	3.3	3.1
Percent of farm years with tractors	100	97	100	100	100	100	100	100
Percent of yrs. with tractor cultivators	80	88	91	95	97	100	100	99
Percent of farm years with trucks	20	45	57	54	52	58	54	79
Rented farms - number	5	18	23	20	9	13	7	9
Size of farm - total acres.	124	160	203	241	278	321	358	609
Tenant's returns for labor, cap., mgt.	\$2 172	\$2 657	\$3 063	\$3 198	\$3 984	\$4 056	\$4 054	\$4 646
Tenant's labor and management earnings	1 936	2 386	2 726	2 832	3 544	3 509	3 563	3 958
Landlord's returns for capital.	1 314	1 830	2 301	2 882	2 902	3 108	3 534	4 112
Landlord's rate earned on investment.	6.0%	7.2%	6.7%	6.9%	6.4%	5.7%	5.9%	6.0%

^{a/} Farms were divided into groups according to the total acres per farm.^{b/} Only biennial and perennial legumes alone or in mixtures were included.

Chart 17.--Intensity of Business as Related to the Net Farm Earnings^{a/}

a/ Each sign (+) represents a farm as farms were distributed from the left to the right of the chart according to the intensity of their business (days of work on crops and livestock per acre) and from the bottom to the top according to the rate earned on the total farm investment. The signs (---○---) represent the averages of groups of farms. See Table 23, page 51, and the discussion on page 45.

Days of work on crops and livestock per acre

Item	.99 or less	1.00 to 1.24	1.25 to 1.49	1.50 to 1.74	1.75 to 1.99	2.00 to 2.24	2.25 to 2.49	2.50 or more
Number of farms	6	28	31	39	40	15	21	20
Rate earned on investment	11.3%	10.1%	9.8%	10.2%	11.3%	11.3%	11.2%	11.9%
Labor and management earnings	\$4 818	\$3 721	\$3 598	\$3 350	\$3 466	\$3 466	\$3 529	\$3 595
Labor earnings per man.	2 648	2 159	2 107	2 102	2 322	2 365	2 226	2 117
Gross earnings per acre	26.50	27.35	30.54	34.85	37.84	44.36	44.08	58.44
Gross earnings per man.	5 715	4 764	4 822	4 695	4 833	5 352	4 826	5 045
Size of farm - total acres.	455	374	345	270	228	213	212	182
Size of business - days of work	387	423	466	437	427	445	495	570
Feed per acre - value	\$ 3.83	\$ 8.86	\$12.33	\$16.06	\$19.89	\$25.46	\$21.71	\$33.28
Percent of tillable land in legumes ^{b/}	17.7	21.1	22.5	24.3	24.6	27.8	25.7	29.0
Crop system rating - % of average	99	98	100	100	100	102	100	105
Crop yields - % of av. on similar soil.	101	94	97	98	101	105	103	103
Livestock efficiency - % of average	106	98	98	98	101	97	100	97
Labor costs - % of average.	100	111	109	107	96	96	94	92
Horse and machinery costs - % of average	122	97	96	94	90	92	88	78
Miscellaneous costs - % of average.	104	100	101	104	94	102	98	99
Price of products sold - % of average	97	98	98	101	99	99	102	104
Average days of work per acre	.85	1.13	1.35	1.62	1.87	2.09	2.34	3.13
Percent of gross earnings from:								
Cattle.	14.4	22.1	29.8	27.4	32.9	32.6	22.2	21.6
Hogs.	2.5	14.9	18.1	25.6	32.5	39.9	32.0	43.9
Sheep	.6	1.2	1.8	1.8	1.9	.6	1.6	1.4
Poultry and eggs.	2.0	2.5	2.0	4.4	4.0	2.1	4.7	4.3
Dairy products.	1.8	4.9	4.0	6.9	5.0	6.0	15.5	15.6
Grain	67.1	40.4	30.6	21.2	11.6	7.5	12.0	4.5
AAA payments.	9.8	10.3	9.6	8.8	7.9	8.2	7.5	5.2
Miscellaneous	1.8	3.7	4.1	3.9	4.2	3.1	4.5	3.5
Rented farms - number	3	16	17	22	22	8	10	6
Size of farm - total acres.	486	385	300	251	210	197	197	206
Tenant's returns for labor, cap., mgt.	\$4 268	\$3 887	\$3 201	\$3 346	\$3 197	\$3 072	\$3 021	\$3 951
Tenant's labor and management earnings	3 808	3 405	2 801	2 946	2 830	2 682	2 671	3 545
Landlord's returns for capital.	5 091	3 083	2 792	2 575	2 327	2 111	2 286	3 115
Landlord's rate earned on investment.	7.5%	6.0%	6.3%	6.2%	6.6%	6.3%	6.4%	7.4%

a/ Farms were divided into groups according to their intensity as measured by the days of productive work (man work units) per acre of the farm.

b/ Only biennial and perennial legumes or in mixtures were included.

Table 24.--County Averages of Factors Helping to Analyze the Farm Business (cont.)

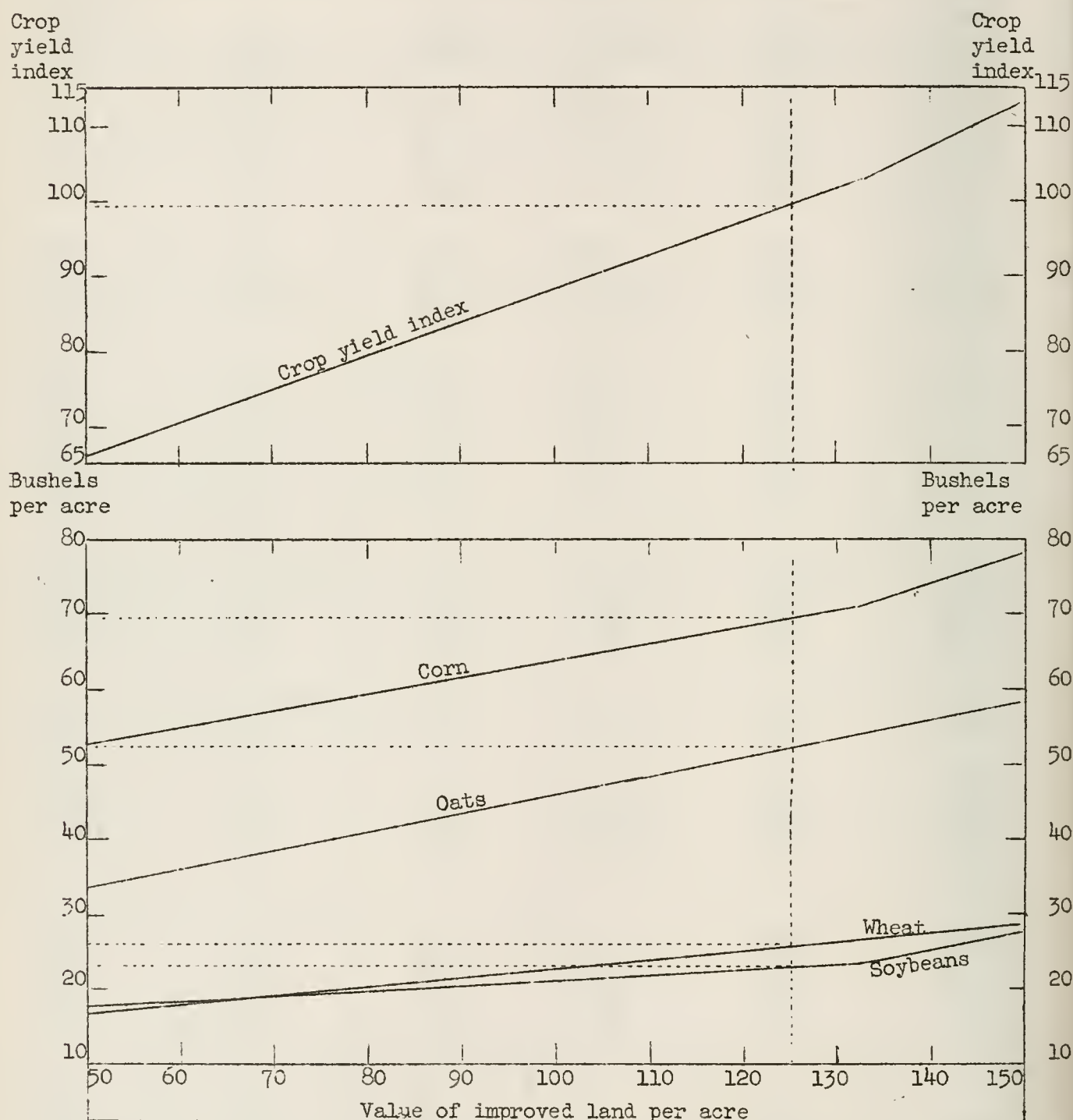
Item	Your farm	Average of all farms	Bureau County
Number of farms.		200	21
Rate earned on investment.	%	10.6%	11.0%
Labor and management earnings.	\$	\$3 560	\$3 701
Labor earnings per man		2 205	2 234
Gross earnings per acre.		34.04	39.76
Gross earnings per man		4 685	4 847
Size of farm - total acres		274	252
Size of business - days of work.		456	484
Feed per acre - value.	\$	\$16.13	\$20.80
Percent of tillable land in legumes ^a /.		23.7	24.6
Crop system rating - % of average.		100	99
Crop yields - % of av. on similar soil		100	100
Livestock efficiency - % of average.		100	97
Labor costs - % of average		100	104
Horse and machinery costs - % of average		94	92
Miscellaneous costs - % of average		100	92
Price of products sold - % of average.		100	100
Cash balance for the year.	\$	\$4 041	\$3 357
Farm products used in household.		285	341
Inventory changes.		2 065	2 794
Receipts less expenses on inventory basis		6 391	6 492
Value of improved land per acre.	\$	\$ 129	\$ 135
Percent of land area tillable.		86.3	86.5
Crop yields - bushels per acre:			
Corn		68.5	75.4
Oats		54.1	49.8
Wheat.		25.6	23.2
Soybeans		23.8	27.0
Livestock returns per \$100 feed:			
Cattle	\$	\$ 143	\$ 136
Hogs		158	159
Sheep.		128	118
Poultry.		185	181
All livestock.		150	147
Rented farms - number.		104	10
Size of farm - total acres		266	213
Tenant's returns for labor, cap., mgt.	\$	\$3 383	\$3 135
Tenant's labor and management earnings		2 981	2 804
Landlord's returns for capital		2 678	2 487
Landlord's rate earned on investment	%	6.4%	6.9%

^a/ Only biennial and perennial legumes alone or in mixtures were included.

Table 24.--County Averages of Factors Helping to Analyze the Farm Business (concl.)

DeKalb County	Grundy County	Kendall County	LaSalle County	Lee County	Marshall- Putnam Counties
36	18	16	48	35	26
10.7%	11.5%	10.1%	10.3%	10.3%	11.1%
\$3 644	\$3 458	\$3 344	\$3 542	\$3 232	\$4 006
2 200	2 178	1 972	2 237	2 123	2 357
42.19	30.68	33.71	34.27	32.56	34.98
5 070	4 366	4 417	4 902	4 756	5 356
245	266	283	282	271	320
465	343	510	436	444	518
\$23.00	\$ 7.03	\$16.40	\$12.63	\$15.32	\$17.61
25.2	21.1	21.9	23.0	23.9	25.2
99	101	99	102	98	101
108	97	101	95	100	94
97	107	96	102	96	100
103	111	100	105	97	96
95	105	84	97	85	92
107	95	99	103	93	103
99	101	101	101	96	103
\$4 247	\$4 118	\$4 052	\$4 318	\$3 477	\$4 495
303	271	280	288	247	272
1 978	1 480	1 885	1 971	2 128	2 204
6 528	5 869	6 217	6 577	5 852	6 971
\$ 131	\$ 117	\$ 122	\$ 136	\$ 123	\$ 132
90.8	87.3	86.7	87.2	87.5	78.0
76.4	61.4	62.8	67.0	67.6	66.6
58.1	53.9	58.5	54.8	52.2	49.8
28.2	24.3	28.8	27.6	19.3	23.5
24.9	21.6	22.5	22.6	24.5	25.9
\$ 135	\$ 194	\$ 144	\$ 152	\$ 137	\$ 144
156	163	158	162	152	161
124	175	111	142	141	121
177	177	183	196	195	187
144	181	152	157	144	152
18	12	9	22	21	12
241	278	313	254	236	372
\$3 754	\$3 214	\$3 604	\$3 300	\$2 789	\$4 229
3 301	2 875	3 086	2 910	2 464	3 709
2 452	2 572	2 886	3 059	2 360	2 971
5.9%	6.8%	6.0%	6.9%	6.5%	5.8%

Chart 18.--The Crop-Yield Index and Yields (bushels per acre) of Corn, Oats, Wheat, and Soybeans, as They Vary With the Value Per Acre of Improved Land^{a/}



^{a/} The average yields of corn, oats, wheat, and soybeans, and the average crop-yield index for farms having any given value of improved land per acre can be found by using this chart in the following manner: Locate on the bottom line the acre value of the improved land; with a sharp-pointed pencil, draw a perpendicular line from the point on the bottom line that indicates the acre value of the improved land (Table 15, page 33) to the top of the chart; from the points where the perpendicular line crosses the lines for the different crops and the crop-yield index, draw horizontal lines across the chart until they cross the left-hand side; and, finally, read the average yields and the crop-yield index from the scale on the left-hand side of the chart. The average yields of farms on which the improved land is valued at \$125 per acre are located on the chart. They are: corn, 69 bushels; oats, 52 bushels; wheat,

Table 25.--Normal Labor Costs, Horse and Machinery Costs, and Miscellaneous Costs per Farm as They Vary With the Days of Productive Work (Man Work Units) on Crops and Livestock

Days of work on livestock per farm	See foot. notes	Days of work on crops per farm								
		40	80	120	160	200	240	280	320	360
120	a	\$ 475	\$ 625	\$ 772	\$ 920	\$1 070	\$1 220	\$1 365	\$1 515	\$1 665
	b	330	495	660	825	995	1 160	1 320	1 490	1 660
	c	340	550	760	965	1 180	1 330	1 590	1 800	2 010
160	a	\$ 575	\$ 720	\$ 865	\$1 015	\$1 160	\$1 305	\$1 450	\$1 600	\$1 745
	b	380	555	730	905	1 085	1 260	1 430	1 605	1 785
	c	390	605	815	1 025	1 245	1 450	1 660	1 875	2 085
200	a	\$ 675	\$ 820	\$ 960	\$1 105	\$1 250	\$1 390	\$1 535	\$1 675	\$1 820
	b	435	620	800	985	1 170	1 355	1 535	1 720	1 910
	c	440	655	875	1 085	1 305	1 515	1 730	1 945	2 165
240	a	\$ 775	\$ 915	\$1 055	\$1 195	\$1 340	\$1 480	\$1 620	\$1 760	\$1 900
	b	485	680	875	1 065	1 260	1 455	1 645	1 835	2 035
	c	490	710	930	1 145	1 370	1 580	1 800	2 020	2 240
280	a	\$ 875	\$1 015	\$1 150	\$1 290	\$1 425	\$1 565	\$1 705	\$1 840	\$1 980
	b	540	740	945	1 140	1 350	1 550	1 750	1 950	2 160
	c	540	765	985	1 205	1 435	1 650	1 870	2 095	2 315
320	a	\$ 975	\$1 110	\$1 245	\$1 380	\$1 515	\$1 650	\$1 785	\$1 920	\$2 055
	b	590	805	1 015	1 220	1 435	1 650	1 860	2 070	2 280
	c	590	815	1 045	1 270	1 495	1 715	1 945	2 165	2 395
360	a	\$1 075	\$1 205	\$1 340	\$1 470	\$1 605	\$1 735	\$1 870	\$2 000	\$2 135
	b	645	865	1 085	1 300	1 525	1 745	1 965	2 185	2 405
	c	640	870	1 100	1 330	1 560	1 785	2 015	2 240	2 470
400	a	\$1 175	\$1 305	\$1 435	\$1 565	\$1 695	\$1 825	\$1 955	\$2 085	\$2 215
	b	695	925	1 160	1 380	1 615	1 845	2 075	2 300	2 530
	c	690	925	1 155	1 390	1 625	1 850	2 085	2 315	2 545
440	a	\$1 275	\$1 400	\$1 530	\$1 655	\$1 785	\$1 910	\$2 035	\$2 165	\$2 290
	b	750	990	1 230	1 460	1 700	1 940	2 180	2 415	2 655
	c	740	975	1 215	1 450	1 685	1 920	2 155	2 385	2 625
480	a	\$1 375	\$1 500	\$1 625	\$1 750	\$1 875	\$1 995	\$2 120	\$2 245	\$2 370
	b	800	1 050	1 300	1 540	1 790	2 040	2 290	2 530	2 780
	c	790	1 030	1 270	1 510	1 750	1 985	2 225	2 460	2 700

- a/ Labor costs per farm on farms with the given amounts of work on crops and livestock.
- b/ Horse and machinery costs per farm on farms with the given amounts of work on crops and livestock.
- c/ Miscellaneous costs per farm on farms with the given amounts of work on crops and livestock. Miscellaneous costs include farm improvements, miscellaneous crop and livestock expenses, taxes, and miscellaneous expenses.

56.

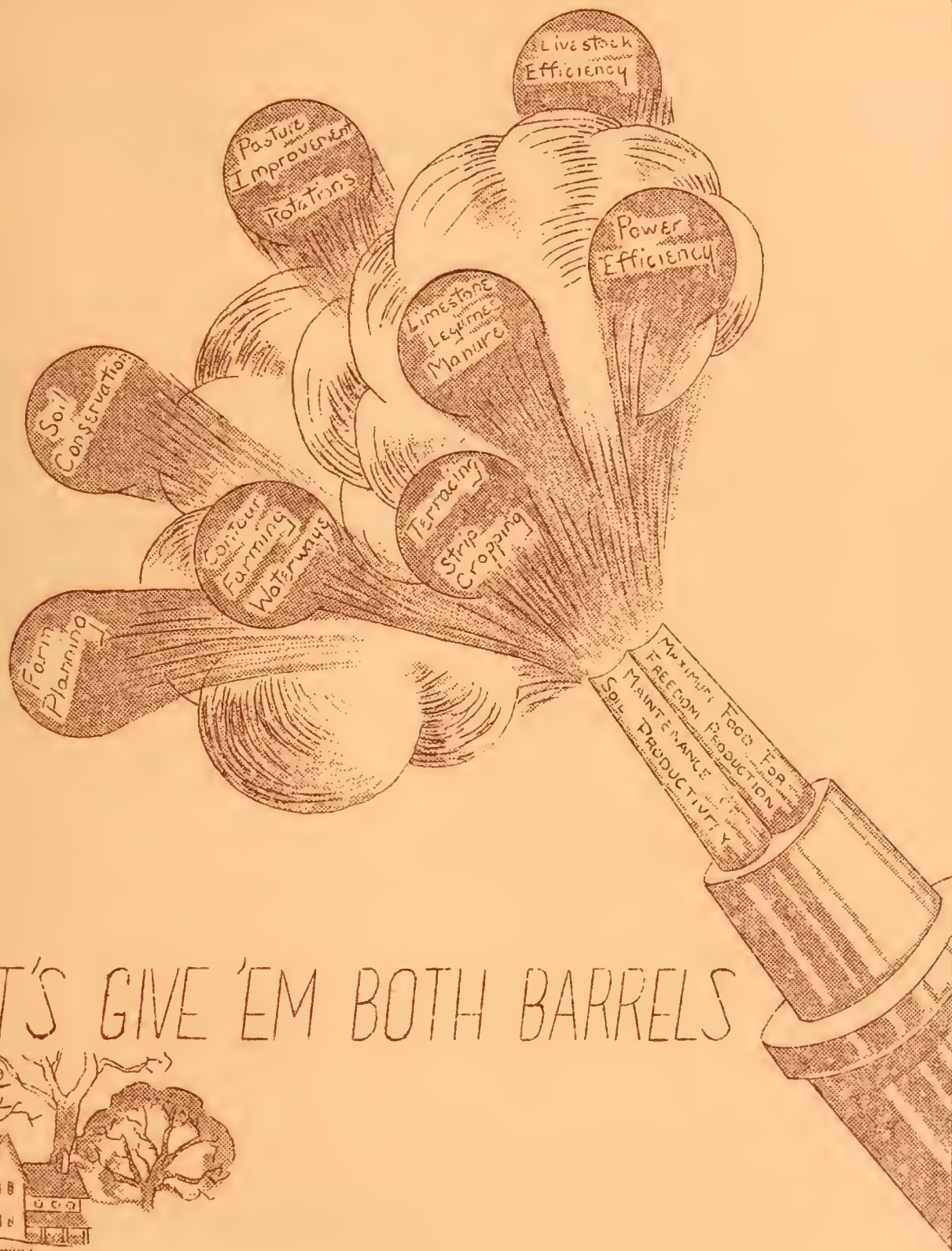
Table 26.--Prices Used for Home-Grown Feeds During 1939, 1940, and 1941

Feed	1939	1940	1941	Three-year average
Corn per bushel	\$.43	\$.54	\$.63	\$.53
Oats per bushel	.28	.32	.36	.32
Barley per bushel	.41	.46	.55	.47
Wheat per bushel	.67	.80	.93	.80
Soybeans per bushel	.74	.83	1.24	.94
Legume hay per ton	7.00	7.00	8.20	7.40
Corn silage per ton	4.50	4.50	4.50	4.50
Pasture per day	.05	.05	.06	.053

Table 27.--Standards for Calculating Days of Productive Labor on Crops and Productive Livestock

Kind of crop or livestock	Days of labor required
Corn	.91 per acre
Oats (threshed)	.66 per acre
Winter wheat (combined)	.37 per acre
Spring wheat (threshed)	.66 per acre
Barley (threshed)	.66 per acre
Soybeans for grain (combined)	.42 per acre
Alfalfa	1.28 per acre
Clover or mixed hay	.88 per acre
Timothy	.88 per acre
Soybean hay	1.49 per acre
Cattle other than cows milked	1.90 per animal unit ^{a/}
Cows milked	11.70 per cow
Hogs	.29 per 100 pounds
Sheep	3.45 per animal unit ^{a/}
Hens	29.20 per 100 hens

^{a/} An animal unit consists of 1 mature cow, 2 heifer calves or yearlings, 1,000 pounds live weight of feeder cattle, 5 to 6 ewes, and 10 to 20 lambs.



SUMMARY OF FARM ACCOUNT RECORD STUDY ON 99 FARMS IN EDWARDSVILLE SOIL CONSERVATION
PROJECT AREA AND SHILOH-O'FALLON SOIL CONSERVATION DISTRICT,
MADISON AND ST. CLAIR COUNTIES, ILLINOIS, 1941

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United States Department of Agriculture
Cooperating

April, 1942

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 99 FARMS IN EDWARDSVILLE SOIL
CONSERVATION PROJECT AREA AND SHILOH-O'FALLON SOIL CONSERVATION
DISTRICT, MADISON AND ST. CLAIR COUNTIES, ILLINOIS, 1941^{1/}

By E. L. Sauer and H. C. M. Case^{2/}

Introduction

This report for the year 1941 is the third of a planned series of annual reports based on complete farm account records of farmer cooperators in the Edwardsville Soil Conservation Project Area and the Shiloh-O'Fallon Soil Conservation District.^{3/} These farm account records are from farmers who have signed agreements with the Soil Conservation Service to operate their farms in accordance with a planned program of soil conservation and erosion control and from neighboring farmers who are operating farms not under agreement with the Soil Conservation Service.

Madison and St. Clair counties are located in Illinois Type-of-Farming Area 6, which Illinois Bulletin 403, "Types of Farming in Illinois," classifies as the wheat, dairy, and poultry section. Wheat is the major crop, and dairying is the major livestock enterprise. The land in these two counties ranges from level land with no erosion problems to rough rolling land with serious erosion problems. Timber, prairie, and bottomland soils are found on the farms included in this study, but timber soils are predominant.

The farm account record analysis which follows is primarily statistical, and the data are summarized in tabular form. Detailed conservation survey maps were made of each farm included in the study, and the farms were classified according to land-use capabilities. In addition, a composite soil productivity rating was computed for each farm.

The land-use-capability classes are determined wholly on the basis of physical characteristics of the land, considering soil type, slope of the land, degree of erosion, permanence of the soil if cultivated (susceptibility to erosion), and other physical and climatic factors that would condition the use of

- ^{1/} The Department of Agricultural Economics in the University of Illinois College of Agriculture, the Madison and St. Clair County Farm Bureaus, the Soil Conservation Service, and the Bureau of Agricultural Economics in the U. S. Department of Agriculture cooperated in this study.
- ^{2/} T. W. May, farm adviser in Madison county, and B. W. Tillman, farm adviser in St. Clair county, cooperated in the organization and supervision of the farm account record study.
- ^{3/} These farm account records were kept in the Illinois Farm Account Book under the supervision of C. H. Krusa of the Operations Division of the Soil Conservation Service. The accounts contained an inventory record taken at the beginning and end of the year on land, buildings, livestock, machinery, equipment, feed, and grains and a record secured from the farm during the year on receipts, expenditures, land use, crop production, livestock production, feeds used for each class of livestock, and contributions to family living. Less detailed farm account records are available on a number of the cooperating and noncooperating farms for several years previous to 1939, when the present complete farm account record project was started.

the land. The land-use-capability classes and soil productivity ratings make possible a comparison of farms with comparable physical soil resources.

Comparison of Soil Conservation Cooperating and Noncooperating Farms

A comparison of 60 cooperating farms with 39 noncooperating farms is made in Tables 1 and 2, pages 9 and 10. Some of the 39 farms not cooperating with the Soil Conservation Service have been following a sound system of farming for many years, including good land use and the use of soil conservation practices; still others in this group are located on level land and, generally speaking, do not have a serious soil erosion problem. On the other hand, many of the 60 cooperating farms are in a transition stage, and the full benefits of the adoption of the conservation plan usually are not evident for several years afterwards.^{1/}

Land Use: The 60 conservation cooperators have made adjustments in their land use in accordance with the land capabilities and have adopted supporting conservation practices. Thus they can grow more "food-for-freedom" crops than the noncooperators with less danger of soil erosion losses. The farms of the cooperators had 33.3 percent of the tillable land in soil-building legumes compared with 26.3 percent on the farms of the noncooperators (Table 2). This percentage indicates that the cooperators are making more effort to conserve their present soil resources and to build up the fertility level of their farms.

Crop Yields: The 60 conservation cooperating farms had higher yields of corn, wheat, and soybeans and a higher crop yield index than the 39 conservation noncooperating farms (Table 2). These yield data indicate that the conservation program (improved land use and land treatment) is having a significant effect on crop yields, even though many of the farm plans are still in the transition stage.

Livestock: The cooperators had more roughage-consuming livestock and had higher returns per \$100 feed fed to productive livestock than the noncooperators had. The larger acreage of improved legume hay and the improved pastures called for in a soil and water conservation and erosion control program appears to be paying dividends in the form of higher livestock returns, and is contributing to the production of more milk and meat during the war emergency.

Expenses: Horse and machinery costs and man labor costs per crop acre were comparable on the 60 cooperating farms and on the 39 noncooperating ones (Table 2). The total farm expenses were \$14.07 an acre on the cooperators' farms and \$13.17 an acre on the noncooperators' farms. Thus, under a planned program, farm operating expenses apparently were not a deterrent to the adoption of a conservation program, since this program contributed to increased production and income.

Earnings: Net farm incomes averaged \$2,355 per farm, or \$13.09 an acre, on the 60 cooperating farms, compared with \$2,340 per farm, or \$13.10 an acre, on the 39 noncooperating ones.

^{1/} The Soil Conservation plan was initiated on 4 farms in 1935, 11 farms in 1936, 12 farms in 1937, 15 farms in 1938, 6 farms in 1939, 6 farms in 1940 and 6 farms in 1941.

Trends in Factors Helping to Analyze the Farm Business, Soil Conservation
Cooperating and Noncooperating Farms, 1938-1941

A comparison of soil conservation cooperating farms with noncooperating ones for the four years 1938-1941 shows some significant trends (Table 3, page 11). The number of farm records was considerably increased in 1939, when the farm account record study was put on its present basis; hence the 1938 data are not strictly comparable with the 1939-41 data. However, the same 19 cooperators and 18 noncooperators used in 1938 are included in the 1939-41 analyses.

Significant shifts in land use occurred during the four-year period, with the cooperating farms having much greater changes. The cooperators increased the proportion of their tillable land in soil-building legumes and they retired considerable land from cultivation to permanent pasture and woods, as shown by the reduction in the percent of land area tillable. Their revised land-use program places them in a better position to grow needed crops during the present war emergency period.

The trend in their crop yields was consistently upward during the 4-year period, but that for the noncooperators declined during this same period (Table 3). The crop-yield index (average yields for all account-keeping farms = 100) reflects the trend in yields on the two groups of farms. The land-use adjustments, the improved land use and soil treatment, and the use of soil conservation practices are resulting in increased yields on the conservation cooperators' farms, while the "usual" system of farming on the conservation noncooperators' farms is resulting in relatively lower yields.

The livestock production and livestock returns on the cooperating farms is increasing in relation to that on the noncooperating farms. The conservation program has resulted in a larger production of improved legume hay and pasture, and the farmers are increasing their roughage-consuming livestock and are finding that this better-quality hay and more abundant pasture results in higher livestock returns. The increased milk production on the conservation cooperating farms is an important contribution to the food-for-freedom goals.

Horse and machinery costs and labor costs per crop acre have not increased on the cooperating farms in relation to these costs on the noncooperating ones. Purchases of limestone, phosphate, fertilizer, legume seeds, and materials for erosion control structures were significantly larger on the cooperating farms when the conservation program was being introduced, but they have now leveled off. Purchases of these items increased materially in 1940-41 on the noncooperators' farms, indicating that they are observing the benefits of the conservation practices and are beginning to see the need for these soil conservation practices on their own farms.

The total farm operating expenses on the cooperating farms were high in 1938, but they were below the expenses on the noncooperators' farms in 1939, 1940, and 1941 or since the major improvements necessary in the adoption of a conservation program have been made. The net receipts per farm and per acre on the cooperating farms compared to the noncooperating ones were lower in 1938 (when major adjustments were made as a result of the adoption of the conservation program), but have compared favorably since that time. The data for this area indicate that, although a temporary lowering of the farm income may occur during the first year or two of the program, the adoption of a soil and water conservation and erosion control program results in higher net farm incomes in time. In addition,

the program conserves and improves the soil and contributes to the maximum production of needed feed and food during the present war emergency period.

Land-Use-Capability Classes Related to Land Use and Other Factors

After the 99 farms were divided between conservation cooperators and noncooperators, they were classified into three groups according to land-use capability. They were placed in the class which contained the major proportion of their total land. (The cooperating farms in each class have slightly more land in the lower capability groups than the corresponding noncooperating farms.) This classification places the farms, insofar as possible, in groups which are physically comparable from the standpoint of the inherent capabilities of the land (soil type, percent of slope, degree of erosion, and susceptibility to erosion). An analysis of the resulting six groups is presented in Table 4, page 12.

The number of noncooperating farms in Classes I and III is small, and the averages for these groups do not have the statistical reliability of the averages of the other groups. However, all the farms tend to follow a uniform pattern: The farms in Class III grow more soil-building legumes and less soil-depleting crops than the farms in Class I and the cooperating farms surpass the noncooperating farms in soil-building crops. A study of the cooperating farms in Table 4 shows that the conservation plan varies for the farms in the different land-use-capability classes and that the plan is adjusted to the physical and economic conditions of the farms and the personal characteristics of the farmers.

For the most part, the soil conservation program on the cooperating farms, compared with the lack of any definite plan on the other group of farms, is resulting in the conservation of soil and water resources, better land use, higher crop yields (considering soil productivity), livestock production, and favorable net farm incomes.

Crop Yields, Farming on the Contour, and Farming Not on the Contour

Table 5 contains an analysis of average per acre yields of corn, wheat, oats, winter barley, soybeans, corn silage, and alfalfa hay grown on the contour (strip cropping, contour farming with terraces, contour farming with buffer strips, or contour farming the entire field with the same crop) and not grown on the contour. The crops grown on the contour outyielded the same crops not grown on the contour. Soybeans, vitally needed during the war emergency, yielded 5.5 bushels more when planted on the contour than when planted up and down hill. This 5.5-bushel increase, at \$1.60 a bushel, represents a financial gain of \$8.80 an acre.

On a limited number of farms, corn and wheat yields were secured both on fields on the contour and on fields not on the contour. (Table 6, page 14). The fields in the two systems were comparable from the standpoint of land-use capability. On Class II land (land subject to moderate erosion), corn yielded 11.6 bushels more on the contour; on Class III land (land subject to severe erosion), it yielded 4.7 bushels more; and on all classes, it yielded 10.7 bushels more. On Class II land, wheat yielded 10.5 bushels more on the contour; on Class III land, it yielded 5.1 bushels more; and on all classes, it averaged 8.4 bushels more. On most of the farms the crop yields in general were higher under contour cultivation. Although the sample of farms is small and no information

is available on the previous treatment of the fields on the contour and not on the contour, the same trend was observed in the 1940 contour yield tests. Hence sufficient evidence is presented to indicate that contour farming is a sound conservation practice that reduces erosion losses and generally results in higher crop yields. The data clearly indicate that the best possible way for farmers operating rolling land to increase production of food for freedom is to farm all of their cropland on the contour.

Contour Farming and Farm Operating Costs

In Madison and St. Clair counties, 35 farms on which all or a considerable part of the farming operations were on the contour were matched with 35 comparable neighboring farms on which none of the field operations were on the contour. In this way the effect of contour farming on farm operating costs could be studied (Table 7, page 14). The results of this study show that horse and machinery costs and labor costs per crop acre as well as total farm operating expenses were practically the same on these two groups of farms. Thus in 1941, as in 1940, the data indicate that contour farming, in addition to aiding in controlling erosion and increasing crop yields, can be performed at no increase in farm operating costs. Facts and figures prove that contour farming is the farmers' "triple-threat" weapon - it increases food-for-freedom production, aids in controlling erosion, and boasts net farm income.

Livestock Related to Soil Conservation

Livestock occupies an important position in a soil conservation program. Such a program frequently calls for the production of hay and pasture, and livestock offers the best means of utilizing such crops. Therefore, an economic study of soil conservation as it applies to the farm would not be complete without some consideration of the livestock enterprises which utilize the products of a conservation program. Detailed feed records were kept on the several livestock enterprises on the farms included in this study. An analysis of these enterprises follows.

Dairy Enterprise

If farmers are to secure economic returns from their farms, the hay and pasture produced under a soil and water conservation and erosion control program must be utilized. The major roughage-consuming class of livestock in this area is dairy cattle.

On 72 of the 99 farms, dairying was the major livestock enterprise. An analysis of the entire dairy enterprise (milk cows and young stock), including an average for the 72 herds, for the 24 most profitable herds, and for the 24 least profitable herds, is presented in Table 8, page 15. Compared with the least profitable herds, the most profitable herds, produced 1,079 pounds more 3.5 milk per cow, had lower feed costs, fed less grain, more high quality legume hay, and more legume pasture per animal unit, and had higher earnings for the farm, even though the farms were smaller and had lower soil productivity ratings. Careful selection and culling of the dairy herd, plus the growing of high-quality hay and pasture as part of the conservation program and, consequently, the wise feeding of the dairy herd, has resulted in the owners being prepared to "shoot

both barrels" during the war emergency period through the production of dairy products needed in the food-for-freedom program and the conservation of soil and water resources.

Beef Enterprise

On some of the farms that are not equipped for dairying, roughages produced under the conservation program are marketed through beef cattle.

The beef enterprise was a major livestock enterprise on only 16 of the 99 farms included in this study. The type of beef enterprise varied, ranging from feeder cattle to beef breeding herds; one or more milk cows were also kept on most of these farms (Table 9, page 16). Feeder cattle made up a larger proportion of the beef enterprise on the best herds than on the poorest ones, and roughages accounted for a smaller proportion of the total feed cost of the former. Returns per \$100 feed fed beef cattle were \$169 for the best herds and only \$109 for the poorest ones. Although the sample of beef herds was small in 1941, as in previous years, the beef enterprise on the farms in this area did not offer as good an opportunity to market roughages advantageously as did the dairy enterprise, especially from the standpoint of the proportion of total feed cost that was roughages and the returns per \$100 feed fed (compare Tables 8 and 9).

Sheep Enterprise

On farms where the soil and water conservation program calls for increased acreages of hay and pasture, native flocks of sheep may be used advantageously to market some of the increased production of roughages and to serve as an additional source of farm income, as well as to produce meat and wool needed in the war effort.

Native flocks of sheep were found on 12 of the 99 farms. The flocks were small, but on the average the sheep made good returns for the feed fed, particularly when over 80 percent of the value of their feed was from roughages, which have a low market value. A wide variation was evident in the efficiency with which the sheep enterprise was conducted, the six best flocks having returns of \$223 for each \$100 fed compared with returns of \$129 for the 6 poorest flocks (Table 11, page 17).

Hog Enterprise

Rotation legume and mixed legume pastures (which are a part of a good conservation program) play an important part in a swine sanitation program and also contribute toward lower feed costs in producing pork. The conservation cooperators utilized their improved legume pastures to provide swine sanitation and low cost feed in producing more efficiently larger quantities of pork. Thus they helped to meet the pork production goals.

An analysis of the hog enterprise on the 83 farms raising hogs, on the 28 farms having the most profitable hog enterprises, and on the 28 farms having the least profitable hog enterprises is shown in Table 12, page 18. The most profitable enterprises were larger than the least profitable ones, and the former apparently fed a better balanced ration and secured more efficient gains. Feed

costs for the most profitable enterprises were \$4.28 for each 100 pounds of pork produced compared with \$6.88 per 100 pounds of pork produced for the least profitable enterprises (Table 12).

Poultry Enterprise

In this area, and particularly on the rougher farms where the adoption of a conservation program calls for a reduction in tilled crops and consequently a more extensive system of farming, the poultry enterprise fits in very well as a means of intensifying the farm business. Many of the more successful small rough farms in this area have a dairy herd to utilize the hay and pasture and a substantial and efficient poultry enterprise to supplement the farm income. Through such a program these farmers are able to utilize efficiently their soil resources and available operator and family labor, secure a modest farm income, and do their part in the war effort by increasing production of dairy and poultry products.

Only those flocks which were fed \$50 or more of feed during the year were included in the analysis of the poultry enterprise. The one-third most profitable flocks, the one-third least profitable flocks, and an average of all flocks are analyzed in Table 12, page 18. Returns from the poultry enterprise varied widely. High egg production per hen, combined with efficient feeding and other factors of good poultry management, paid dividends on the best flocks and contributed to the food-for-freedom goals for increased egg production.

Feed Cost of Producing Milk Related to Conservation

In connection with the general farm account records, a record of the quantities and cost of feeds used in producing milk was kept on 74 of the 99 farms included in this study. In order to answer questions raised as a result of the dairy cost study in this area, the dairy feed cost records for 1941 were grouped and analyzed on the bases of (1) relation of milk production per cow to feed cost, (2) feed cost of producing milk (high feed costs and low feed costs), and (3) relation of use of roughages to feed cost (Tables 13, 14, and 15, pages 18 and 19).

In Table 13 the 74 herds are divided into the 37 highest producing herds and the 37 lowest producing ones. In Table 14, the 74 herds are divided into two groups, those herds whose feed costs for producing 100 pounds of 3.5 milk were below average for the entire group and those herds whose feed costs were above average. In order to study the relationship between the use of roughages--that is, the products of a conservation program--the cost of milk production, and other pertinent factors, the 74 farms included in Table 15 are divided into two equal groups based on the proportion which roughages represented of the total value of feed fed the milk cows. In this dairy feed cost analysis, grains, hay, fodder, stover, and silage were valued at average farm prices, and pasture was valued at 6 cents per pasture day. The herds used in this study are a select group, a majority of them being in the dairy herd improvement association, and they represent herds which are better than average.

The analysis of the milk production feed cost in Tables ¹³20, ¹⁴21, and ¹⁵22 brings out the following factors which were consistent in all three analyses: (1) the feed cost of producing 100 pounds of 3.5 milk was lowest on the farms that had the highest milk production per cow; (2) the farms that fed the cows a well-balanced ration, including an ample amount of high-quality legume hay and

improved pasture in accordance with production, had the lowest milk production costs; (3) the highest producing herds that followed a sound feeding program had the highest returns per \$100 of feed fed the dairy cows; (4) alfalfa and other legume hay silage accounted for a considerable amount of the silage fed to the higher producing and lower cost herds; and (5) roughages accounted for a higher proportion of the total feed cost of the "top" herds in each of the three analyses.

The above data are consistent with feed cost of milk production data secured in 1939 and 1940 in this area and indicate that milk can be produced at a low cost with well-culled, high-producing herds by feeding a high proportion of good-quality legume roughages. The data for 1941, as in the two previous years, show that good-quality roughages--the products of a conservation program--can be utilized profitably by the dairy herd without resorting to large "out-of-pocket" costs for feed, and this wise use of the farms' resources results in increased dairy production, which is vitally important during the war emergency.

Summary

The planned soil conservation program results in conserving soil and keeping it in shape for continued profitable production, and it also increases crop yields per acre, livestock production per farm, and net farm income. Thus soil conservation practices are extremely important to farmers who are stepping up production to further the food-for-freedom program.

Conservation cooperating farms are securing higher crop yields through sound land use, soil saving and improving rotations, use of available manure, application of limestone and phosphate, and supporting practices such as contouring, contour strip cropping, terracing, and use of grass waterways. Most of these practices are now being put into effect by the conservation farmers themselves.

The records clearly indicate that for maximum food-for-freedom production and for the conservation of the soil, as well as for the benefit of the farmers' pocketbook, all sloping and rolling land should be farmed on the contour.

Since adopting conservation farming, the cooperating farmers are growing more livestock feed and producing more milk, meat, and wool. They have a better balanced feed supply due to improved land use, higher feed-producing pastures, and higher crop yields. They are utilizing these feeds--roughages and concentrates--to produce needed livestock products and to increase farm income.

The farm record studies on conservation cooperating and neighboring noncooperating farms indicate that farmers can contribute most to the war effort by adopting and following a sound, well-planned soil and water conservation and erosion control program.

Table 1.--Investments, Cash Income, Cash Expenses, and Earnings, Soil Conservation Cooperating and Noncooperating Farms, Madison and St. Clair Counties, Illinois, 1941

Item	Your farm	Average of all farms	60 farms cooperating	39 farms not cooperating
Number of farms - - - - -	--	99	60	39
Capital Investments				
Land- - - - -	\$	\$10 130	\$10 362	\$ 9 772
Farm improvements - - - - -		3 069	3 135	2 968
Livestock - - - - -		2 256	2 296	2 195
Feed and grain- - - - -		1 965	2 037	1 854
Machinery and equipment - - - - -		2 018	2 128	1 849
Total - - - - -	\$	\$19 438	\$19 958	\$18 638
Cash Receipts				
Farm improvements - - - - -	\$	\$ 6	\$ 6	\$ 5
Horses - - - - -		47	30	72
Productive livestock: Cattle- - - - -		739	831	597
Dairy sales - - - - -		1 536	1 546	1 521
Hogs- - - - -		835	821	857
Sheep - - - - -		41	37	46
Poultry - - - - -		105	100	112
Egg sales - - - - -		289	298	277
Total productive livestock- - - - -	()	(3 545)	(3 633)	(3 410)
Feed and grain- - - - -		1 032	1 106	917
Machinery and equipment - - - - -		199	226	159
Automobile (farm share) - - - - -		50	61	32
Labor off farm - - - - -		37	33	43
Miscellaneous - - - - -		10	8	13
AAA payments - - - - -		119	123	114
Total - - - - -	\$	\$ 5 045	\$ 5 226	\$ 4 765
Cash Expenses				
Farm improvements - - - - -	\$	\$ 264	\$ 249	\$ 287
Horses- - - - -		30	30	30
Productive livestock: Cattle- - - - -		342	395	259
Hogs- - - - -		54	67	34
Sheep - - - - -		2	3	1
Poultry - - - - -		30	26	36
Total productive livestock- - - - -	()	(428)	(491)	(330)
Feed and grain - - - - -		530	513	555
Machinery and equipment - - - - -		927	907	958
Automobile (farm share) - - - - -		197	226	152
Hired labor - - - - -		286	316	241
Miscellaneous-- - - - - -		28	29	26
Crop expense - - - - -		121	131	106
Livestock expense - - - - -		44	42	48
Taxes - - - - -		180	182	176
Total - - - - -	\$	\$ 3 035	\$ 3 116	\$ 2 909
Summary				
Cash balance- - - - -	\$	\$ 2 010	\$ 2 110	\$ 1 856
Farm products used in household - - - - -		270	255	294
Total inventory change- - - - -		897	811	1 028
Receipts less expenses- - - - -	\$	\$ 3 177	\$ 3 176	\$ 3 178
Total unpaid labor- - - - -		827	821	838
Returns for capital and management- - - - -	\$	\$ 2 350	\$ 2 355	\$ 2 340
Rate earned on investment - - - - -	%	12.1%	11.9%	12.5%

Table 2.--Factors Helping to Analyze the Farm Business, Soil Conservation Cooperating and Noncooperating Farms, Madison and St. Clair Counties, Illinois, 1941

Item	Your farm	60 farms cooperating	39 farms not cooperating
Soil productivity rating ^{a/} - - - - -	_____	6.17	6.13
Acres in farm - - - - -	_____	180	178.7
Gross receipts per acre - - - - -	\$ _____	\$27.16	\$26.27
Total expense per acre - - - - -	_____	14.07	13.17
Net receipts per acre - - - - -	\$ _____	\$13.09	\$13.10
<u>Investments</u>			
Value of land per acre - - - - -	\$ _____	\$ 58	\$ 55
Total investments per acre - - - - -	_____	111	104
<u>Land Use</u>			
Percent of land area tillable - - - - -	_____	77.4	80.4
Percent of tillable land in crops - - - - -	_____	84.3	80.3
Percent of tillable land in:			
Corn - - - - -	_____	19.9	19.3
Oats - - - - -	_____	5.8	9.3
Wheat - - - - -	_____	25.7	25.0
Soybeans - - - - -	_____	3.3	3.0
Other crops - - - - -	_____	14.7	10.8
Legume hay and pasture - - - - -	_____	23.6	22.0
Nonlegume hay and pasture - - - - -	_____	7.0	10.6
Soil-building legumes ^{b/} - - - - -	_____	33.3	26.3
<u>Crop Yields</u>			
Corn, bu. - - - - -	_____	53.7	49.3
Oats, bu. - - - - -	_____	39.0	42.0
Wheat, bu. - - - - -	_____	23.8	22.3
Soybeans, bu. - - - - -	_____	10.4	8.4
Crop-yield index - - - - -	_____	102.3	96.4
<u>Livestock Factors</u>			
Value of feed fed productive livestock - - - - -	\$ _____	\$2 029	\$2 118
Returns per \$100 feed fed productive l.s. - - - - -	_____	182	182
Number of cows milked - - - - -	_____	10.8	11.2
Pounds of 3.5 milk per cow - - - - -	_____	8 186	8 081
Returns per \$100 feed fed cattle - - - - -	\$ _____	\$ 177	\$ 176
Number of litters farrowed - - - - -	_____	6.5	7.7
Returns per \$100 feed fed hogs - - - - -	\$ _____	\$ 194	\$ 190
Eggs per hen - - - - -	_____	129	128
Returns per \$100 feed fed poultry - - - - -	\$ _____	\$ 191	\$ 194
Lbs. of meat (beef, pork and sheep) produced per acre - - - - -	_____	84	81
Lbs. of 3.5 milk produced per acre - - - - -	_____	491	477
<u>Expense Factors</u>			
Horse and mach. cost per crop acre - - - - -	\$ _____	\$ 7.30	\$ 7.18
Man labor cost per crop acre - - - - -	_____	9.40	8.98
Purchases of limestone, phosphate, fertilizer, and legume seeds - - - - -	\$ _____	\$ 119	\$ 87
Percent Participation in AAA Program - - - - -	% _____	93.3%	87.2%

a/ Based on soil productivity. The most productive soil types on level topography and with no erosion are rated 1. Soil ratings range from 1, the best, to 10, the poorest.

b/ Include all biennial and perennial legumes and also soybeans and first-year sweet clover plowed under as a green manure crop.

Table 3.--Trends in Factors Helping to Analyze the Farm Business, Soil Conservation Cooperating and Noncooperating Farms, Madison and St. Clair Counties, Illinois, 1938-1941

Item	Farms cooperating				Farms not cooperating			
	1938	1939	1940	1941	1938	1939	1940	1941
Number of farms - - - - -	19	51	57	60	18	35	31	39
Soil productivity rating ^{a/} - - - - -	6.10	6.14	6.14	6.17	5.90	5.99	5.97	6.13
Acres in farm - - - - -	147.6	163.0	175.0	180.0	144.3	161.3	163.6	178.7
Land Use:								
Percent of land area tillable - - - - -	84.4	78.0	76.9	77.4	86.5	83.3	82.5	80.4
Percent of tillable land in:								
Corn - - - - -	23.2	22.1	20.5	19.9	23.0	21.0	19.6	19.3
Small grains - - - - -	40.9	32.2	34.4	35.3	38.9	34.7	33.1	36.7
Other crops - - - - -	5.3	13.4	14.8	14.2	4.8	10.4	9.7	11.4
Hay and pasture - - - - -	30.6	32.3	30.3	30.6	33.3	33.9	37.6	32.6
Soil-building legumes - - - - -	27.2	33.0	34.2	33.3	20.4	25.8	28.1	26.3
Crop Yields:								
Corn, bu. - - - - -	44.5	61.7	54.1	53.7	42.5	59.5	51.8	49.3
Wheat, bu. - - - - -	20.6	24.8	26.1	23.8	19.4	25.8	26.8	22.3
Crop yield index - - - - -	98.5	100.0	100.2	102.3	102.6	99.7	99.5	96.4
Value of feed fed productive livestock - - -	\$1 104	\$1 314	\$1 650	\$2 029	\$1 212	\$1 529	\$1 575	\$2 118
Feed fed per acre to productive livestock -	7.48	8.06	9.43	11.27	8.40	9.48	9.63	11.85
Returns per \$100 feed fed productive livestock	159	165	156	182	185	153	153	182
Percent of income from productive livestock -	71.2	60.9	61.6	75.7	77.5	63.9	65.1	82.0
Horse and machinery cost per crop acre - -	\$ 4.81	\$ 4.86	\$ 5.24	\$ 7.30	\$ 5.11	\$ 5.10	\$ 5.70	\$ 7.18
Man labor cost per crop acre - - - - -	7.33	8.45	8.20	9.40	7.90	8.66	8.62	8.98
Purchases of limestone, phosphate, fertilizer, and legume seeds ^{b/} - - - - -	274	100	105	119	45	50	86	87
Value of land per acre - - - - -	\$ 63	\$ 60	\$ 57	\$ 58	\$ 63	\$ 55	\$ 57	\$ 55
Total investment per acre - - - - -	108	103	107	111	112	102	109	104
Returns for capital and management - - - -	\$ 813	\$1 608	\$2 009	\$2 356	\$1 304	\$1 587	\$1 605	\$2 340
Rate earned on investment - - - - -	5.1%	9.3%	10.8%	11.9%	8.1%	9.6%	9.0%	12.5%
Gross receipts per acre - - - - -	\$18.64	\$20.27	\$22.42	\$27.16	\$21.27	\$20.87	\$20.97	\$26.27
Total expenses per acre - - - - -	13.14	10.40	10.94	14.07	12.18	11.03	11.18	13.17
Net receipts per acre - - - - -	\$ 5.50	\$ 9.87	\$11.48	\$13.09	\$ 9.09	\$ 9.84	\$ 9.79	\$13.10

a/ Ranges from 1, the best, to 10, the poorest.

b/ Also includes materials for erosion control structures.

Table 4.--Land-Use-Capability Classes as Related to Land Use and Other Factors,
Soil Conservation Cooperating and Noncooperating Farms, Madison and
St. Clair Counties, Illinois, 1941

Item	Farms cooperating			Farms not cooperating		
	Class I2/ 11	Class II 30	Class III 19	Class I 6	Class II 24	Class III 9
Number of farms- - - - -	5.09	6.39	6.50	4.29	6.35	6.38
Soil productivity rating ^{b/} - - - - -	186.5	187.1	165	123.1	188.6	189.1
Acres in farm- - - - -						
Land Use:						
Percent of land area tillable- - - - -	70.7	78.1	73.9	95.6	80.5	73.4
Percent of tillable land in:						
Corn - - - - -	23.3	18.8	19.4	24.1	18.3	19.9
Small grains - - - - -	37.6	33.4	37.5	35.0	38.2	32.7
Other crops- - - - -	13.9	15.6	11.9	8.7	11.0	14.2
Hay and pasture- - - - -	25.2	32.2	31.2	32.2	32.5	33.2
Soil-building legumes- - - - -	29.8	34.2	33.9	24.8	20.6	29.0
Crop Yields:						
Corn, bu. - - - - -	56.6	54.7	48.8	63.4	46.1	48.2
Wheat, bu. - - - - -	25.6	24.0	22.0	25.6	22.1	20.2
Crop-yield index - - - - -	106.8	106.2	94.2	118.3	97.9	89.0
Feed fed per acre to productive livestock- - - - -	\$11.83	\$11.64	\$10.35	\$15.28	\$11.28	\$12.13
Returns per \$100 feed fed productive l.s.- - - - -	178	177	195	175	184	181
Percent of income from productive l.s. - - - - -	73.3	76.2	76.9	71.0	82.2	90.8
Lbs. of milk and meat produced per acre- - - - -	465	615	556	583	598	532
Horse and machinery cost per crop acre - - - - -	\$ 6.79	\$ 7.26	\$ 7.72	\$ 7.60	\$ 6.92	\$ 7.71
Man labor cost per crop acre - - - - -	8.34	9.40	10.16	11.70	8.27	9.50
Purchases, of limestone, phosphate, fertilizer, and legume seeds - - - - -	130	130	72	106	89	57
Value of land per acre - - - - -	\$ 71	\$ 56	\$ 51	\$ 70	\$ 55	\$ 47
Total investment per acre- - - - -	124	111	103	123	105	94
Returns for capital and management - - - - -	\$2 728	\$2 517	\$1 886	\$2 424	\$2 363	\$2 224
Rate earned on investment- - - - -	11.8%	12.2%	11.1%	16.0%	11.9%	12.5%
Gross receipts per acre- - - - -	\$28.77	\$27.09	\$26.24	\$37.67	\$25.21	\$24.20
Total expenses per acre- - - - -	14.14	13.64	14.81	17.98	12.68	12.44
Net receipts per acre- - - - -	\$14.63	\$13.45	\$11.43	\$19.69	\$12.53	\$11.76

a/ Farms were placed in the class in which the major part of their land fell. The classes designate land as follows:

I, Suitable for cultivation without special conservation practices; II, Suitable for cultivation with simple conservation practices; III, Suitable for cultivation with intensive conservation practices.

b/ Ranges from 1, the best, to 10, the poorest.

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Table 5.--Average per Acre Yields on the Contour and Not on the Contour,
All Account-Keeping Farms, Madison and St. Clair Counties,
Illinois, 1941

Item	On contour	Not on contour
<u>Corn:</u>		
Number of farms - - - - -	35	98
Yield, bu. per acre - - - - -	61.7	48.4
<u>Wheat:</u>		
Number of farms - - - - -	20	97
Yield, bu. per acre - - - - -	28.1	22.3
<u>Oats:</u>		
Number of farms - - - - -	11	84
Yield, bu. per acre - - - - -	42.3	39.7
<u>Winter barley:</u>		
Number of farms - - - - -	18	41
Yield, bu. per acre - - - - -	35.6	34.4
<u>Soybeans:</u>		
Number of farms - - - - -	6	33
Yield, bu. per acre - - - - -	14.5	9.0
<u>Corn silage:</u>		
Number of farms - - - - -	11	47
Yield, tons per acre - - - - -	11.9	9.7
<u>Alfalfa hay: (In strips or buffers)</u>		
Number of farms - - - - -	19	95
Yield, tons per acre - - - - -	3.3	2.5

Table 6.--Average per Acre Yields on the Contour and Not on the Contour, on the Same Farms, Madison and St. Clair Counties, Illinois, 1941

Item	Farms by land-use-capability classes		All farms
	Class II ^a /	Class III ^b /	
Corn:			
Number of farms- - - - -	11	8	19
Acres on contour - - - - -	161	70	231
Acres not on contour - - - - -	152	122	274
Yield per acre of corn on contour (bu.)- -	69.1	52.4	64.0
Yield per acre of corn not on contour (bu.)	57.5	47.7	53.3
Number of farms on which corn on contour yielded the highest- - - - -	9	6	15
Wheat:			
Number of farms- - - - -	8	5	13
Acres on contour - - - - -	163	54	217
Acres not on contour - - - - -	252	95	347
Yield per acre of wheat on contour (bu.) -	30.4	25.3	29.1
Yield per acre of wheat not on contour (bu.)	20.9	20.2	20.7
Number of farms on which wheat on contour yielded the highest- - - - -	7	4	11

a/ Class II land is sloping and is subject to moderate erosion. It is suitable for cultivation with simple conservation practices.

b/ Class III land is rolling and is subject to severe erosion. It is suitable for cultivation with intensive conservation practices.

Table 7.--Farm Operating Costs on the Contour and Not on the Contour,^a/ Madison and St. Clair Counties, Illinois, 1941

Item	35 farms contour farming	35 farms not contour farming
Size of farm--acres - - - - -	175	174
Percent of land area tillable - - - - -	75.2	81.7
Crop acres per farm - - - - -	111	116
Feed fed per acre - - - - -	\$12.04	\$12.40
Horse and machinery cost per crop acre- - - - -	7.38	7.23
Man labor cost per crop acre- - - - -	9.93	9.82
Total farm expenses per acre- - - - -	14.43	14.28

a/ Farms farming on the contour (strip cropping, contour farming with terraces, contour farming with buffer strips, or contour farming with the same crop) matched with farms not farming on the contour (matched on the basis of size of farm; land-use-capability class, including soil type, topography, and degree of erosion; type of farming; and amount of livestock, labor, machinery, and equipment).

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Table 8.--Dairy Enterprise, Madison and St. Clair Counties,
Illinois, 1941

Item	Your farm	Average of all farms	Returns per \$100 feed fed	
			One-third highest farms	One-third lowest farms
Number of farms- - - - -	--	72	24	24
Number of cows milked- - - - -	_____	13	14	13
Number of animal units - - - - -	_____	19	20	20
Percent of cattle units milked - - -		68	72	64
Value of feed fed- - - - -	\$ _____	\$1 247	\$1 175	\$1 411
Dairy sales- - - - -	_____	1 998	2 400	1 701
Total returns from cattle- - - - -	_____	2 440	2 915	2 165
Returns per \$100 feed fed- - - - -	\$ _____	196	248	154
Percent of total cattle returns from dairy sales - - - - -		81.9	82.3	78.6
Pounds of 3.5 milk per cow - - - - -		8 370	8 958	7 879
Dairy sales per 100 lb. milk produced	\$ _____	\$ 1.82	\$ 1.90	\$ 1.71
Feed cost per 100 lb. milk produced-		1.14	.93	1.42
Feed fed per animal unit (lb.)				
Grain- - - - -	_____	1 497	1 277	1 749
Supplement - - - - -	_____	710	532	555
Hay- - - - -	_____	4 471	4 975	4 115
Silage - - - - -	_____	3 278	3 552	4 039
Pasture days - - - - -		168	176	170
Percent of total feed value that was				
Concentrates - - - - -	_____	46.6	45.2	47.2
Roughages - - - - -		53.4	54.8	52.8
Acres in farm- - - - -		179	176	206
Net farm income per acre - - - - -	\$ _____	\$13.30	\$15.65	\$10.09

Table 9.--Beef Enterprise, Madison and St. Clair Counties,
Illinois, 1941

Item	Your farm	Average of all farms	Average of best farms ^{a/}	Average of poorest farms ^{a/}
Number of farms- - - - -	--	16	8	8
Number of animal units - - - - -		25.1	27.6	22.5
Total feed fed cattle- - - - -	\$ _____	\$ 1 538	\$ 1 300	\$ 1 776
Returns from beef- - - - -	_____	1 516	1 733	1 299
Total returns from cattle- - - - -	_____	2 072	2 200	1 944
Returns per \$100 feed fed cattle - -	\$ _____	135	169	109
Percent of total cattle returns from beef- - - - -		73	79	67
Pounds of beef produced- - - - -	_____	12 720	17 732	7 709
Returns per 100 lb. produced - - -	\$ _____	\$ 11.92	\$ 9.77	\$ 16.85
Feed cost per 100 lb. produced - - -		8.88	5.88	15.77
Feed fed per 100 lb. of beef pro- duced (lb.)				
Grain- - - - -	_____	670	553	938
Supplement - - - - -	_____	42	20	91
Hay - - - - -	_____	509	281	1 033
Silage - - - - -	_____	557	345	1 044
Pasture days - - - - -	_____	35	27	53
Percent of total feed value that was				
Concentrates - - - - -	_____	48	51	45
Roughages- - - - -	_____	52	49	55
Acres in farm- - - - -	_____	177	167	187
Net farm income per acre - - - - -	\$ _____	\$ 14.26	\$ 14.96	\$ 13.64

^{a/} Based on returns per \$100 feed fed.

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Table 10.--Sheep Enterprise, Madison and St. Clair Counties,
Illinois, 1941

Item	Your farm	Average of all farms	Average of best farms ^{a/}	Average of poorest farms ^{a/}
Number of farms- - - - -	--	12	6	6
Number of animal units ^{b/} - - - - -		5.1	5.3	4.9
Value of feed fed sheep- - - - -	\$ _____	\$ 130	\$ 129	\$ 130
Total returns from sheep - - - - -		228	288	169
Returns per \$100 feed fed- - - - -	\$ _____	\$ 176	\$ 223	\$ 129
Pounds of lamb and mutton produced - -		1 738	1 914	1 562
Returns per 100 lb. produced - - - - -	\$ _____	\$13.14	\$15.04	\$10.81
Feed cost per 100 lb. produced- - - - -		7.47	6.75	8.35
Feed fed per 100 lb. produced (lb.)				
Grain- - - - -		110	57	177
Supplement - - - - -		3	3	3
Hay- - - - -		445	566	299
Pasture days - - - - -		66	56	79
Percent of total feed value that was				
Concentrates - - - - -		17.2	10.7	23.7
Roughages- - - - -		82.8	89.3	76.3

^{a/} Based on returns per \$100 feed fed.^{b/} Five Mature sheep or 10 to 15 lambs or feeders, depending on size, equal 1 animal unit.Table 11.--Hog Enterprise, Madison and St. Clair Counties,
Illinois, 1941

Item	Your farm	Average of all farms	Average of one-third best farms ^{a/}	Average of one-third poorest farms ^{a/}
Number of farms- - - - -	--	83	28	28
Total feed fed hogs- - - - -	\$ _____	\$ 584	\$ 543	\$ 524
Total returns from hogs- - - - -		1 123	1 260	771
Returns per \$100 feed fed- - - - -	\$ _____	\$ 192	\$ 232	\$ 147
Pounds of pork produced- - - - -		10 934	12 676	7 611
Returns per 100 lb. produced - - - - -	\$ _____	\$ 10.27	\$ 9.94	\$ 10.12
Feed cost per 100 lb. produced - - - - -		5.34	4.28	6.88
Number of pigs farrowed- - - - -		60	61	46
Number of pigs weaned- - - - -		49	48	38
Number of litters farrowed - - - - -		8	8	6
Number of pigs weaned per litter - - -		6.4	6.2	6.2
Feed fed per 100 lb. produced (lb.)				
Grain- - - - -		395	329	474
Supplement - - - - -		38	30	52
Pasture days - - - - -		2.1	2.9	2.2
Total purchases of hogs- - - - -	\$ _____	\$ 61	\$ 80	\$ 43
Total sales of hogs- - - - -		928	1 076	623

^{a/} Based on returns per \$100 feed fed.

Table 12.--Poultry Enterprise, Madison and St. Clair Counties, Illinois, 1941

Item	Your flock	Average of all flocks	Average of one-third best flocks ^{a/}	Average of one-third poorest flocks ^{a/}
Number of flocks - - - - -	--	83	28	28
Total feed fed poultry - - - - -	\$ _____	\$ 250	\$ 223	\$ 259
Total returns from poultry - - - - -	_____	475	556	352
Returns per \$100 feed fed- - - - -	\$ _____	\$ 190	\$ 250	\$ 136
Average number of hens - - - - -	_____	143	165	126
Eggs per hen - - - - -	_____	129	136	113
Returns per hen- - - - -	\$ _____	\$3.32	\$3.37	\$2.80
Feed cost per hen- - - - -	_____	1.75	1.35	2.06
Feed cost per dozen eggs - - - - -	_____	.16	.12	.22
Feed fed per hen (lb.)				
Farm grains - - - - -	_____	83	72	99
Purchased concentrates - - - - -	_____	29	23	32
Total pounds - - - - -	_____	112	95	131

a/ Based on returns per \$100 feed fed.

Table 13.--Milk Production per Cow as Related to Feed Cost of Producing Milk and Other Selected Factors, Dairy Enterprise Analysis, Madison and St. Clair Counties, Illinois, 1941

Item	Your farm	Average of all 74 herds	37 highest producing herds	37 lowest producing herds
Average number of cows per farm - - - - -	_____	13.4	13.9	13.0
Acres per farm- - - - -	_____	182.9	188.5	177.2
Net income per acre - - - - -	\$ _____	\$ 13.85	\$ 14.60	\$ 13.04
Pounds of 3.5 milk produced per cow - - - - -	_____	8 311	9 459	7 090
Feed cost per cow - - - - -	\$ _____	\$ 72.83	\$ 76.13	\$ 69.31
Value of milk per cow - - - - -	_____	150.46	170.20	129.47
Income above feed cost per cow- - - - -	_____	77.63	94.07	60.16
Feed cost per 100 lb. of 3.5 milk produced-	\$ _____	\$.88	\$.80	\$.98
Feed fed per cow (lb.)				
Grain - - - - -	_____	1 881	1 930	1 828
Millfeeds - - - - -	_____	670	718	618
Hay - - - - -	_____	4 782	5 046	4 501
Silage- - - - -	_____	4 679	4 719	4 637
Pasture days- - - - -	_____	208	234	179
Percent of total feed value that was				
Concentrates- - - - -	_____	46.4	46.1	46.7
Roughages - - - - -	_____	53.6	53.9	53.3
Returns per \$100 feed fed - - - - -	\$ _____	\$ 207	\$ 224	\$ 187

Table 14.--Feed Cost of Producing Milk and Other Selected Factors,
Dairy Enterprise Analysis, Madison and St. Clair
Counties, Illinois, 1941

Item	Feed cost above average	Feed cost below average
Number of farms - - - - -	37	37
Average number of cows per farm - - - - -	12.8	13.9
Acres per farm- - - - -	182.1	183.6
Net income per acre - - - - -	\$ 13.67	\$ 14.03
Pounds of 3.5 milk produced per cow - - -	7 880	8 844
Feed cost per cow - - - - -	\$ 83.02	\$ 64.60
Value of milk per cow - - - - -	141.59	161.07
Income above feed cost per cow- - - - -	58.57	96.47
Feed cost per 100 lb. of 3.5 milk produced	\$ 1.05	\$.73
Feed fed per cow (lb.)		
Grain - - - - -	2 224	1 594
Millfeeds - - - - -	800	561
Hay - - - - -	6 126	5 380
Silage- - - - -	6 673	3 687
Pasture days- - - - -	184	164
Percent of total feed value that was		
Concentrates- - - - -	48.0	44.5
Roughages - - - - -	52.0	55.5
Returns per \$100 feed fed - - - - -	\$ 170	\$ 249

Table 15.--Relation of Use of Roughage to Feed Cost of Milk
Production and Other Selected Factors, Dairy
Enterprise Analysis, Madison and St. Clair
Counties, Illinois, 1941

Item	Percent of feed cost that was roughages	
	60 percent or more	Less than 60 percent
Number of farms - - - - -	37	37
Average number of cows per farm - - - - -	12.7	14.2
Acres per farm- - - - -	183	183
Net income per acre - - - - -	\$ 14.43	\$ 13.27
Pounds of 3.5 milk produced per cow - - -	8 294	8 288
Feed cost per cow - - - - -	\$ 68.89	\$ 76.37
Value of milk per cow - - - - -	149.20	151.60
Income above feed cost per cow- - - - -	80.31	75.23
Feed cost per 100 lb. of 3.5 milk produced-	\$.83	\$.92
Feed fed per cow (lb.)		
Grain - - - - -	1 568	2 162
Millfeeds - - - - -	464	890
Hay - - - - -	6 159	5 320
Silage- - - - -	5 514	3 929
Pasture days- - - - -	186	160
Percent of total feed value that was		
Concentrates- - - - -	37.8	53.4
Roughages - - - - -	62.2	46.6
Returns per \$100 feed fed - - - - -	\$ 217	\$ 198



LET'S GIVE 'EM BOTH BARRELS

ECONOMICS OF SOIL CONSERVATION AND EROSION CONTROL
Stephenson County, Illinois, 1941
AE1851

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 48 FARMS IN FREEPORT SOIL CONSERVATION
PROJECT AREA AND SOIL CONSERVATION SERVICE CAMP DEMONSTRATION AREAS,
STEPHENSON COUNTY, ILLINOIS, 1941

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Department of Agricultural Economics
Agricultural Experiment Station, University of Illinois
Urbana, Illinois
and
Soil Conservation Service and Bureau of Agricultural Economics
United States Department of Agriculture
Cooperating

June, 1942

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 48 FARMS IN FREEPORT SOIL CONSERVATION
PROJECT AREA AND SOIL CONSERVATION SERVICE CAMP DEMONSTRATION AREAS,
STEPHENSON COUNTY, ILLINOIS, 1941^{1/}

By E. L. Sauer, K. E. Kinsinger, F. R. Coughlin, and H. C. M. Case^{2/}

Introduction

This report is based on farm account records from Stephenson county farmers who have signed agreements with the Soil Conservation Service to operate their farms in accordance with a planned program of soil conservation and erosion control, and from neighboring farmers who are operating farms not under agreement with the Soil Conservation Service.^{3/}

Stephenson county is located in northwestern Illinois in Type-of-Farming Area 2, which Illinois Bulletin 403, "Types of Farming in Illinois," classifies as the mixed livestock section. Corn, oats, and hays are the major crops; the major sources of income are dairying, hogs, and beef cattle. The land in Stephenson county ranges from level, with no erosion problems, to rough and rolling, with serious erosion problems. It is predominantly undulating-to-rolling prairie, although timber and some bottomland soils are found on the farms included in this study. Considerable variation occurs in the soil depth, the limestone bed rock being covered with glacial till and wind-blown silt or loess of varying thickness. Hence, erosion may be of serious consequence on many of the farms in this area.

The farm account record analysis which follows is primarily statistical, and the data are summarized in tabular form. Detailed conservation survey maps were made of each of the Soil Conservation Service cooperating farms included in the study, and the farms were classified according to land-use capabilities. In addition, a composite soil productivity rating was computed for each farm.

The land-use-capability classes are determined wholly on the basis of the following physical characteristics: soil type, slope, degree of erosion, permanence of the soil if cultivated (susceptibility to erosion), and other physical and climatic factors that would condition the use of the land.

^{1/} The Department of Agricultural Economics in the University of Illinois College of Agriculture, the Stephenson County Farm Bureau, and the Soil Conservation Service and the Bureau of Agricultural Economics in the U. S. Department of Agriculture cooperated in this study.

^{2/} V. J. Banter, Farm Adviser in Stephenson county, supervised the farm account project.

^{3/} These farm account records were kept in the Illinois Farm Account Book. The accounts contained an inventory record taken at the beginning and end of the year on land, buildings, livestock, machinery, equipment, feed, and grains and a record secured from the farm during the year on receipts, expenditures, land use, crop production, livestock production, feeds used, and contributions to family living.

Comparison of Soil Conservation Cooperating and Noncooperating Farms

Forty-four of the 86 farm account keepers in Stephenson county are cooperating with the Soil Conservation Service and have a planned program of soil conservation and erosion control on their farms. Of the remaining 42 account-keeping farms, 24 were matched with 24 farms cooperating with the Soil Conservation Service on the basis of (1) soil type and topography (using the State Soil Survey and Geological Survey maps as well as the location of the farms and personal knowledge about them, (2) proportion of the land area tillable, (3) size of farm (acres), and (4) land value per acre (for improved land and for the total farm).

A comparison of 24 cooperating farms with 24 noncooperating farms is made in Tables 1 and 2, pages 6 and 7. Some of the 24 farms not cooperating have been following a sound system of farming for many years, including good land use and the use of soil conservation practices; others in this group are located on fairly level land and, generally speaking, do not have a serious soil erosion problem. On the other hand, most of the 24 cooperating farms are in a transition stage, and the full benefits of the adoption of the conservation plan usually are not evident for several years afterward. In general, the cooperating and noncooperating farms are comparable from the standpoint of physical resources.

Land Use. The cooperating farms, for the most part, have made adjustments in their land use in accordance with the land capabilities and have adopted supporting conservation practices. Thus they can grow more "food-for freedom" crops than the non-cooperators with less danger of soil erosion losses. They had fewer acres in crops and a larger proportion of their tillable land in legume hay and pasture and in soil-building legumes than the noncooperating farms (Table 2). This proportion indicates that the cooperators are making more effort to conserve their present soil resources and to build up the fertility level of their farms.

Crop Yields. The 24 cooperating farms had higher yields of all crops and a higher crop-yield index than the 24 noncooperating farms (Table 2). These yield data indicate that the conservation program (improved land use and land treatment plus the use of conservation practices such as contour farming, strip cropping, terracing, etc.) is having a significant effect on crop yields, even though many of the farm plans are still in the transition stage.

Livestock. Livestock occupies an important position in a soil conservation program in this area, since such a program usually calls for the production of a considerable amount of hay and pasture and since livestock offers the best means of utilizing such crops. The cooperating farms had more roughage-consuming livestock and fed more feed to productive livestock. The returns per \$100 of feed fed to all productive livestock were slightly lower on the cooperating farms than on the noncooperating ones. These lower returns were due largely to the fact that these farms are making considerable changes in the amount and type of livestock fed in order to utilize the increased acreages of legumes and improved pastures. They have not completed adjustments in their livestock enterprises; however, these enterprises will result in greater efficiency in livestock feeding as these adjustments are completed.

Since the type of livestock produced has considerable bearing on the returns per \$100 of feed fed and since the cooperators fed more feed to the several classes of livestock and produced more pounds of meat (beef, pork, and sheep) and milk per acre than the noncooperators, no significance can be attached to the difference in returns per \$100 feed on the two groups of farms (Table 2). The

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cooperating farms milked 1.6 more cows per farm and produced slightly more milk per cow, along with utilizing more hay and pasture and legume silage and less concentrates in producing milk; hence they had lower "out-of-pocket" costs for the dairy enterprise. Careful selection and culling of the dairy herd plus the growing of high-quality hay and pasture as part of the conservation program and, consequently, the wise feeding of the dairy herd should result in "preparedness" to meet present defense needs on two fronts--the production of dairy products needed in the defense program and the conservation of soil and water resources.

The utilization of the larger acreage of improved legume hay and the improved pastures on the cooperators' farms generally results in a larger income from livestock, higher farm incomes, and soil improvement from the manure produced as a result of the livestock-feeding operations.

Expenses. Horse and machinery costs, man labor costs per crop acre, and total farm operating costs per acre were higher on the cooperating farms. The larger amount of livestock on these farms would naturally result in somewhat higher operating expenses. The 24 cooperating farms spent \$126 for limestone, phosphate, fertilizers, and legume seeds in 1941 compared with \$88 on the 24 noncooperating farms.

Earnings. Net farm incomes averaged \$3,881 per farm, or \$25.41 an acre, on the 24 cooperating farms and \$3,764 per farm, or \$23.97 an acre, on the 24 noncooperating ones. The higher net income for the former group indicates that the conservation program, with good management, can be made to pay dividends on a majority of the cooperating farms. With the better land use, greater emphasis on soil conservation, soil improvement, and erosion control on the cooperating farms, the present incomes on these farms should increase in relation to those on the noncooperating farms as time passes and as the farm business becomes adjusted to the increased production of erosion control and soil improvement crops. In the meantime, these cooperating farms are maintaining their soil resources as a heritage for future generations.

Land-Use-Capability Classes Related to Land Use, Crop Yields, and Other Factors

The 24 cooperating farms were classified into three groups, based on land-use-capability classes. The farms were placed in the class which contained the major proportion of their total land (Table 3, page 8). This classification shows the differences in the soil productivity and percent of land area tillable for the farms in the three land-use-capability classes as well as the differences in land use, crop yields, expenses, and incomes. Most of the cooperating farms are still in a transition stage and hence have not made all the land-use adjustments called for in their conservation plans. Table 3 shows that the Class III and Class IV farms have fewer acres in grain, larger proportions of their cropland planted on the contour, lower crop yields, smaller amounts of livestock, and lower farm incomes than the Class II farms.

Purchases of limestone, phosphate, fertilizers, and legume seeds--items needed in a soil conservation and improvement program--were made on the three groups of farms in inverse ratio to the needs of the farms (that is, their present land capabilities and need for soil improvement). The lower expenditures for soil improvement on the farms of lower land-use capabilities were probably due, at

least in part, to the fact that these farms had lower incomes and consequently less cash available for farm improvements. Thus, Table 3 shows that flexible, sound conservation programs are needed in order to meet the physical differences in the farms and that efficiency in the various factors of production is essential in order to secure the highest net farm income.

Crop Yields, Farming on the Contour, and Farming Not on the Contour

Table 4 contains an analysis of average per acre yields of corn, oats, barley, soybeans, corn silage, alfalfa hay, and soybean hay grown on the contour (strip-cropping, contour-farming with terraces, contour-farming with buffer strips, or contour-farming the entire field with the same crop) and not grown on the contour. The crops grown on the contour outyielded the same crops not grown on the contour. One of the important reasons for these higher yields is that contour-farming usually prevents a runoff of most of the rain that falls during the growing season. Soybeans, vitally needed during the war emergency, yielded 2.8 bushels more when planted on the contour than when planted up and down hill. This 2.8-bushel increase, at \$1.60 a bushel, represents a financial gain of \$4.48 an acre.

In a comparison of yields of crops grown on the contour and not grown on the contour, the productive capacity of the land varies between the different farms as well as on each individual farm. Soil type, slope, degree of erosion, and previous land use and land treatment create these differences in the productive capacity of the various fields and farms. The farmers who are progressive enough to farm their rolling land on the contour probably have followed other recommended practices and soil treatments that contribute to higher crop yields, such as using limestone, growing legumes, following good rotations, etc. Nevertheless, generally speaking, the land on which the crops are grown on the contour is more rolling, is more severely eroded, and possesses lower inherent productivity than the land on which the crops are grown under the usual field arrangement.

On a limited number of farms, corn and oat yields were secured both on fields on the contour and on fields under the usual field system (Table 5, page 10). The fields in the two systems were comparable from the standpoint of land-use capability. On Class II land (land subject to moderate erosion), corn yielded 2.5 bushels more on the contour; on Class III land (land subject to severe erosion), it yielded 21.6 bushels more; and on all classes, it yielded 11.9 bushels more. Only 6 farms had oats both on the contour and not on the contour, but on these farms on all classes of land, oats yielded 13.4 bushels more on the contour.

The fact that a large number of the farms had crops on the contour but only a few had the same crops both on the contour and not on the contour may serve to indicate that a number of farmers in this area have recognized the advantages of contour cultivation on land subject to soil and water erosion losses and hence have put all of certain crops on the contour. Although the sample of farms is small and no information is available on the previous treatment of the fields on the contour and not on the contour, the same trend was observed in the 1940 contour yield tests. Hence sufficient evidence is presented to indicate that contour farming is a sound conservation practice that reduces erosion losses and generally results in higher crop yields. The data clearly indicate that the best possible way for farmers operating rolling land to increase production of food for freedom is to farm all of their cropland on the contour.

Contour-Farming and Farm-Operating Costs

Twenty of the 24 cooperating farms on which all or a major part of the farming operations were on the contour were matched with 20 comparable neighboring farms on which none of the field operations were on the contour. In this way, the effect of contour-farming on farm-operating costs could be studied (Table 6, page 10). The results of this study show that horse and machinery costs and labor costs per crop acre were practically the same on the two groups of farms, and the total farm-operating expenses increased proportionately to the amount of livestock on the farms where contour farming was practiced. Thus, the data indicate that contour-farming, in addition to aiding in controlling erosion and increasing crop yields, can, under most conditions, be performed at no increase, in farm-operating costs. Facts and figures prove contour farming is the farmers "triple threat" weapon -- it increases food-for-freedom production, aids in controlling erosion, and boosts net farm income.

Summary

The planned soil conservation program results in conserving soil and keeping it in shape for continued profitable production, and it also increases crop yields per acre, livestock production per farm, and net farm income. Thus soil conservation practices are extremely important to farmers who are stepping up production to further the food-for-freedom program.

Conservation cooperating farms are securing higher crop yields through sound land use, soil saving and improving rotations, use of available manure, application of limestone and phosphate, and supporting practices such as contouring, contour strip cropping, terracing, and use of grass waterways. Most of these practices are now being put into effect by the conservation farmers themselves.

The records clearly indicate that for maximum food-for-freedom production and for the conservation of the soil, as well as for the benefit of the farmers' pocketbook, all sloping and rolling land should be farmed on the contour.

Since adopting conservation farming, the cooperating farmers are growing more livestock feed and producing more milk, meat, and wool. They have a better balanced feed supply due to improved land use, higher feed-producing pastures, and higher crop yields. They are utilizing these feeds--roughages and concentrates--to produce needed livestock products and to increase farm income.

The farm record studies on conservation cooperating and neighboring non-cooperating farms indicate that farmers can contribute most to the war effort by adopting and following a sound, well-planned soil and water conservation and erosion-control program.

Table 1.--Investments, Receipts, Expenses, and Earnings, Soil Conservation
Cooperating and Noncooperating Farms, Stephenson County,
Illinois, 1941

Item	Your farm	24 farms cooperating	24 farms not cooperating
Number of farms - - - - -	--	24	24
<u>Capital Investments</u>			
Land- - - - -	\$ _____	\$ 9 985	\$11 113
Farm improvements - - - - -	_____	4 894	5 083
Livestock - - - - -	_____	3 358	3 143
Feed and grain- - - - -	_____	1 852	1 871
Machinery and equipment - - - - -	_____	2 010	1 927
Total - - - - -	\$ _____	\$22 099	\$23 137
<u>Cash Receipts</u>			
Farm improvements - - - - -	\$ _____	\$ 6	\$ --
Horses- - - - -	_____	22	20
Productive livestock: Cattle- - - - -	_____	1 289	1 763
Dairy sales - - - - -	_____	1 876	1 721
Hogs- - - - -	_____	2 157	1 803
Sheep - - - - -	_____	56	22
Poultry - - - - -	_____	77	100
Egg sales - - - - -	_____	297	276
Total productive livestock- - - - -	()	(5 752)	(5 685)
Feed and grain- - - - -	_____	219	217
Machinery and equipment - - - - -	_____	178	122
Automobile (farm share) - - - - -	_____	69	13
Labor off farm - - - - -	_____	22	8
Miscellaneous - - - - -	_____	27	16
AAA payments - - - - -	_____	105	145
Total - - - - -	\$ _____	\$ 6 400	\$ 6 226
<u>Cash Expenses</u>			
Farm improvements - - - - -	\$ _____	\$ 329	\$ 320
Horses- - - - -	_____	16	10
Productive livestock: Cattle- - - - -	_____	938	752
Hogs- - - - -	_____	85	79
Sheep - - - - -	_____	2	2
Poultry - - - - -	_____	34	41
Total productive livestock- - - - -	()	(1 059)	(874)
Feed and grain- - - - -	_____	896	518
Machinery and equipment - - - - -	_____	921	697
Automobile (farm share) - - - - -	_____	210	125
Hired labor - - - - -	_____	390	183
Miscellaneous - - - - -	_____	35	27
Crop expense- - - - -	_____	140	107
Livestock expense - - - - -	_____	76	59
Taxes - - - - -	_____	213	183
Total - - - - -	\$ _____	\$ 4 285	\$ 3 103
<u>Summary</u>			
Cash balance- - - - -	\$ _____	\$ 2 115	\$ 3 123
Farm products used in household - - - - -	_____	292	255
Total inventory change- - - - -	_____	2 240	1 252
Receipts less expenses- - - - -	\$ _____	\$ 4 647	\$ 4 630
Total unpaid labor- - - - -	_____	766	866
Returns for capital and management- - - - -	\$ _____	\$ 3 881	\$ 3 764
Rate earned on investment - - - - -	%	17.56%	16.26%

Table 2.--Factors Helping to Analyze the Farm Business, Soil Conservation Cooperating and Noncooperating Farms, Stephenson County, Illinois, 1941

Item	Your farm	24 farms cooperating	24 farms not cooperating
Acres in farm- - - - -	_____	153	157
Acres in crops - - - - -	_____	96.9	99.3
Gross receipts per acre- - - - -	\$ _____	\$ 44.85	\$ 39.06
Total expense per acre - - - - -	_____	19.44	15.09
Net receipts per acre- - - - -	\$ _____	\$ 25.41	\$ 23.97
Investments			
Value of land per acre - - - - -	\$ _____	\$ 65	\$ 71
Value of improvements per acre - - - -	_____	32	32
Total investments per acre - - - - -	_____	145	147
Land Use			
Percent of land area tillable- - - - -	_____	84.5	82.6
Percent of tillable land in crops- - -	_____	75.1	76.8
Percent of tillable land in:			
Corn - - - - -	_____	26.4	27.2
Oats - - - - -	_____	17.8	23.4
Barley - - - - -	_____	--	.2
Soybeans - - - - -	_____	1.1	1.0
Other crops- - - - -	_____	6.9	3.6
Legume hay and pasture - - - - -	_____	33.5	29.2
Nonlegume hay and pasture- - - - -	_____	14.2	14.9
Soil-building legumes ^{a/} - - - - -	_____	34.2	30.8
Crop Yields			
Corn, bu.- - - - -	_____	75.6	67.6
Oats, bu.- - - - -	_____	44.8	42.8
Barley, bu.- - - - -	_____	39.4	36.2
Soybeans, bu.- - - - -	_____	20.7	17.7
Crop-yield index ^{b/} - - - - -	_____	104.6	96.5
Livestock Factors			
Value of feed fed productive l.s.- - -	\$ _____	\$ 3 457	\$ 2 710
Returns per \$100 feed fed prod. l.s. -	_____	186	207
Number of cows milked- - - - -	_____	15.8	14.2
Dairy returns per cow milked - - - -	\$ _____	\$ 123	\$ 127
Pounds of 3.5 milk per cow - - - - -	_____	7 425	6 982
Number of litters farrowed - - - - -	_____	18	13
Number of pigs weaned per litter - - -	_____	5.8	4.6
Returns per litter farrowed- - - - -	\$ _____	143	113
Eggs produced per hen- - - - -	_____	128	131
Poultry returns per hen- - - - -	_____	\$ 3.75	\$ 3.11
Pounds of beef produced per farm - - -	_____	11 680	11 232
Pounds of pork produced per farm - - -	_____	24 724	19 482
Pounds of sheep produced per farm- - -	_____	465	107
Total lb. meat produced per acre - -	_____	241	197
Pounds of 3.5 milk produced per acre -	_____	770	633
Expense Factors			
Horse and mach. cost per crop acre - -	\$ _____	\$ 7.10	\$ 6.78
Man labor cost per crop acre - - - - -	_____	11.71	10.48
Purchases of limestone, phosphate, fertilizer, and legume seeds - - - -	\$ _____	\$ 126	\$ 88

^{a/} Includes all biennial and perennial legumes and also soybeans and first-year sweet clover plowed under as a green manure crop.

^{b/} Average crop yields for all the 62 farm account-keeping farms in Stephenson county in 1940 equal 100.

Table 3.--Land Use, Crop Yields, and Other Factors, Soil Conservation
Cooperating Farms Grouped According to Land-Use-Capability
Classes, Stephenson County, 1941^{a/}

Item	Class II farms	Class III farms	Class IV farms
Number of farms - - - - -	12	9	3
Average soil rating ^{b/} - - - - -	3.72	4.34	5.36
Acres in farm - - - - -	147.7	157.5	158.3
Acres in tillable land - - - - -	127.7	129.4	134.1
Acres in crops - - - - -	96.0	97.5	98.7
Percent of land area tillable - - - - -	86.5	82.2	84.7
Percent of tillable land in crops - - - - -	65.0	61.9	73.6
Acres farmed on contour - - - - -	56.0	72.5	89.3
Percent of crop acres on contour - - - - -	58.3	74.4	90.5
Acres in grain - - - - -	64.4	56.8	53.7
Acres in hay - - - - -	25.6	30.7	42.7
Acres in tillable pasture - - - - -	31.4	31.6	35.4
Percent of tillable land in hay and pasture - - - - -	44.7	48.2	58.2
Acres in soil-building legumes - - - - -	43.3	38.7	64.0
Percent of tillable land in soil-building legumes ^{c/} - - - - -	33.9	29.9	47.7
Crop-Yields			
Corn, bu. - - - - -	83.8	68.7	56.9
Oats, bu. - - - - -	47.8	43.2	40.4
Barley, bu. - - - - -	39.9	30.5	--
Soybeans, bu. - - - - -	17.9	27.1	15.0
Crop-yield index ^{d/} - - - - -	112.6	98.1	87.0
Total livestock returns - - - - -	\$ 6 884	\$ 6 401	\$ 4 808
Gross farm income - - - - -	7 320	6 712	5 378
Total farm expenses - - - - -	3 115	2 910	2 560
Net farm income - - - - -	\$ 4 205	\$ 3 802	\$ 2 818
Horse and machinery cost - - - - -	\$ 688	\$ 696	\$ 669
Man labor cost - - - - -	1 155	1 065	1 261
Horse and machinery cost per crop acre - - - - -	\$ 7.16	\$ 7.14	\$ 6.78
Man labor cost per crop acre - - - - -	11.16	10.92	12.78
Purchases of limestone, phosphate, fertilizer, and legume seeds - - - - -	\$ 145	\$ 135	\$ 27
Gross farm income per acre - - - - -	\$ 49.57	\$ 42.61	\$ 33.97
Total farm expense per acre - - - - -	21.10	18.47	16.17
Net farm income per acre - - - - -	\$ 28.47	\$ 24.14	\$ 17.80

^{a/} Class II - Land requiring some simple supporting practices of conservation or other land treatment to obtain continued moderate-to-high yields of adapted farm crops.

Class III - Land subject to severe erosion which requires some good supporting conservation practices and/or other land treatments to be used for cultivation.

Class IV - Land adapted primarily for the production of hay and pasture and suitable for limited cultivation with soil treatment, long rotations, and intensive conservation practices.

^{b/} Ranges from 1, the best, to 10, the poorest.

^{c/} Includes all biennial and perennial legumes and also soybeans and first-year sweet clover plowed under as a green manure crop.

^{d/} Average crop yields for all the 86 farm account-keeping farms in Stephenson county in 1941 equal 100.

Table 4.--Average Per Acre Yields on the Contour and
Not on the Contour, all Account-Keeping
Farms, Stephenson County, Illinois, 1941

Item	On contour	Not on contour
<u>Corn:</u>		
Number of farms - - - - -	42	61
Yield, bu. per acre - - - - -	77.2	71.6
<u>Oats:</u>		
Number of farms - - - - -	26	57
Yield, bu. per acre - - - - -	45.6	43.0
<u>Barley:</u>		
Number of farms - - - - -	10	15
Yield, bu. per acre - - - - -	41.5	41.1
<u>Soybeans:</u>		
Number of farms - - - - -	10	12
Yield, bu. per acre - - - - -	20.9	18.1
<u>Corn Silage:</u>		
Number of farms - - - - -	18	29
Yield, tons per acre - - - - -	12.1	11.2
<u>Alfalfa Hay: (In strips or buffers)</u>		
Number of farms - - - - -	22	46
Yield, tons per acre - - - - -	2.8	2.3
<u>Soybean Hay:</u>		
Number of farms - - - - -	3	7
Yield, tons per acre - - - - -	1.7	2.1

Table 5.--Average Per Acre Yields on the Contour and Not on the Contour, on the Same Farms, Stephenson County, Illinois, 1941

Item	Farms by land-use-capability classes			All farms
	Class IIA/	Class IIIB/	Class IVC/	
Corn:				
Number of farms - - - - -	15	5	1	21
Acres on contour- - - - -	276	60	4	340
Acres not on contour- - - - -	190	153	6	349
Yield per acre of corn on contour (bu.) - - - - -	82.3	80.7	50.0	81.7
Yield per acre of corn not on contour (bu.) - - - - -	79.8	59.1	30.8	69.8
Number of farms on which corn on contour yielded the highest - -	10	3	1	14
Oats:				
Number of farms - - - - -	2	4	--	6
Acres on contour- - - - -	42	47	--	89
Acres not on contour- - - - -	23	68	--	91
Yield per acre of oats on contour (bu.) - - - - -	52.4	58.2	--	55.5
Yield per acre of oats not on contour (bu.) - - - - -	38.6	43.2	--	42.1
Number of farms on which oats on contour yielded the highest - -	2	3	--	5

a/ Class II - Land sloping, subject to moderate erosion, and suitable for cultivation with simple conservation practices.

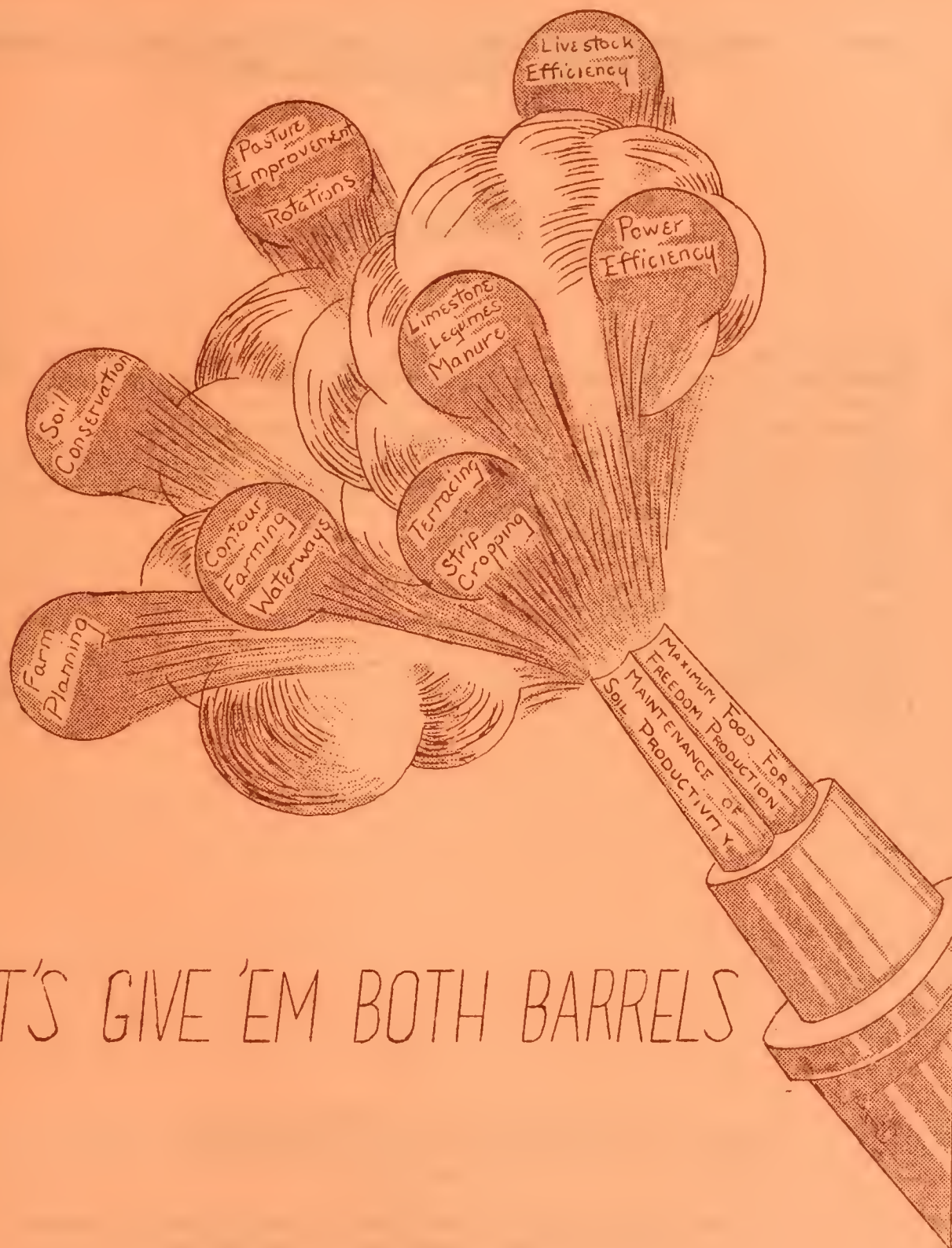
b/ Class III - Land rolling, subject to severe erosion, and suitable for cultivation with intensive conservation practices.

c/ Class IV - Land rolling to strongly rolling, subject to severe erosion, and suitable for limited cultivation with soil treatment, long rotations, and intensive conservation practices.

Table 6.--Farm Operating Costs on the Contour and Not on the Contour,^{a/} Stephenson County, Illinois, 1941

Item	20 farms contour-farming	20 farms not contour-farming
Size of farm--acres - - - - -	156.3	153.2
Percent of land area tillable - - - - -	84.3	84.9
Crop acres per farm - - - - -	100.2	98.0
Feed fed per acre - - - - -	\$23.01	\$18.00
Horse and machinery cost per crop acre- - - - -	7.11	6.82
Man labor cost per crop acre- - - - -	11.25	11.02
Total farm expenses per acre- - - - -	\$30.73	\$24.74

a/ Farms farming on the contour (strip-cropping, contour-farming with terraces, contour-farming with buffer strips, or contour-farming with the same crop on an entire field) matched with farms not farming on the contour (on the basis of size of farm; land-use-capability class, including soil type, topography, and degree of erosion; percent of land area tillable; value of land per acre; type of farming; and amount of machinery and equipment).



LET'S GIVE 'EM BOTH BARRELS

ECONOMICS OF SOIL CONSERVATION AND EROSION CONTROL
McLean County, Illinois, 1941
AE-1853

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 99 FARMS IN THE LeROY SOIL CONSERVATION
PROJECT AREA, McLEAN COUNTY, ILLINOIS, 1941

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United States Department of Agriculture
Cooperating

June, 1942

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 99 FARMS IN THE LeROY SOIL CONSERVATION PROJECT AREA, McLEAN COUNTY, ILLINOIS, 1941

By E. L. Sauer, F. R. Coughlin, C. C. Morgan, and H. C. M. Case^{1/}

Introduction

This report for the year 1941 is the seventh in a series of annual reports based on farm-account records of farmer cooperators in the LeRoy Soil Conservation Project Area; however, it is only the third in a planned series of annual reports based on complete farm account records.^{2/} These farm account records are secured from farmers who have signed agreements with the Soil Conservation Service to operate their farms in accordance with a planned program and from neighboring farmers who are operating farms not under any such agreement.

McLean County is located in Illinois Type-of-Farming Area 4a, which is classified as the cash-grain section in Illinois Bulletin 403, "Types of Farming in Illinois." Corn, oats, and soybeans are the major crops, and grain sales constitute the major source of income. Approximately 75 percent of the LeRoy Project Area in this county is either undulating or gently rolling prairie land; 14 percent is level land which lies along the drainage ways; and the remaining 11 percent is either rolling or gently rolling timberland, much of which has been cleared of the native timber. Erosion is evident on all the slopes in this area and is particularly noticeable in the areas which were formerly timbered. Continuous cropping with soil-depleting and clean-tilled crops has so depleted organic matter and available soil fertility in most of the area that erosion is progressing at an increasing rate.

The farm-account-record analysis which follows is primarily statistical, and the data are summarized in tabular form. Detailed survey maps were made of each farm included in the study, and the farms were classified according to land-use capabilities. In addition, a composite soil-productivity rating was computed for each farm.

The land-use-capability classes are determined wholly on the basis of physical characteristics of the land, considering soil type, slope of the land, degree of erosion, permanence of the soil if cultivated (its susceptibility to erosion), and other physical and climatic factors that would condition the use of the land. The land-use-capability classes and soil-productivity ratings make possible a comparison of farms with comparable physical soil resources.

^{1/} The Department of Agricultural Economics in the University of Illinois College of Agriculture, the Soil Conservation Service, and the Bureau of Agricultural Economics in the United States Department of Agriculture cooperated in this study.

^{2/} These farm-account records were kept in the Illinois Farm Account Book under the supervision of C. C. Morgan of the Operations Division of the Soil Conservation Service. The accounts contained an inventory record taken at the beginning and end of the year on land, buildings, livestock, machinery, equipment, feed, and grains and a record secured from the farm during the year on receipts, expenditures, land use, crop production, livestock production, feeds used for each class of livestock, and contributions to family living.

Comparison of Soil Conservation Cooperating and Noncooperating Farms

A comparison of 69 cooperating farms with 30 noncooperating ones is made in Tables 1 and 2, pages 9 and 10. Some of the latter group have been following a sound system of farming for many years, including good land use and the use of conservation practices; still others in this group are located on level land and, generally speaking, do not have a serious erosion problem. On the other hand, many of the 69 cooperating farms are in a transition stage, and the full benefits of the adoption of the plan will not be evident for several years.^{1/}

Land Use: The 69 cooperators have made adjustments in their land use in accordance with the land capabilities and have adopted supporting conservation practices. Thus they can grow more "food-for-freedom" crops than the noncooperators with less danger of erosion losses. The local drought in 1940 killed off part of the legume seedings, thus reducing the soil-building legumes acreage for 1941. However, the farms of the cooperators had 24.6 percent of the tillable land in soil-building legumes compared with 16.0 percent on the farms of the noncooperators (Table 2). This percentage indicates that the cooperators are making more effort to conserve their present soil resources and to build up the fertility level of their farms.

Crop Yields: The 69 cooperating farms had higher yields of corn and oats, and slightly higher yields of soybeans, and a higher crop-yield index than the 30 noncooperating farms (Table 2). These yield data indicate that the conservation program is having a significant effect on crop yields, even though some of the farm plans are still in the transition stage.

Livestock: Investments in all livestock averaged almost twice as large on cooperating farms as on noncooperating ones (Table 1). The cooperating farms fed \$2,330 worth of feed to productive livestock and had returns of \$189 per \$100 worth of feed fed; in contrast, the noncooperating farms fed \$1,284 worth of feed and had returns of \$182. The cooperating farms are making considerable change in the amount and type of livestock fed in order to utilize the increased acreages of legume hay and pasture. Hence, they have not yet completed the adjustments which will result in greater efficiency in livestock feeding. However, the larger acreage of improved legume hay and pastures called for in a conservation program appears to be paying dividends in the form of higher livestock returns, and at the same time, is contributing to the production of more milk and meat needed during the war crisis.

Expenses: Horse and machinery costs, man-labor costs per crop acre, and total farm operating costs per acre were slightly higher on the cooperating farms. The larger amount of livestock on these farms would naturally result in somewhat higher operating expenses.

Earnings: Net farm incomes averaged \$5,000 per farm, or \$21.94 an acre, on the cooperating farms, and \$4,249 per farm, or \$19.30 an acre, on the noncooperating ones. The higher net income for the former group indicated that with good management the conservation program can be made to pay dividends on a majority of the cooperating farms.

^{1/} The soil conservation plan was initiated on 5 farms in 1934, 21 farms in 1935, 18 farms in 1936, 10 farms in 1937, 11 farms in 1938, and 4 farms in 1939.

Trends in Factors Helping to Analyze the Farm Business, Soil Conservation
Cooperating and Noncooperating Farms, 1938-1941

A comparison of cooperating farms with noncooperating ones for the four years 1938-1941 shows some significant trends (Table 3, page 11). The number of farm records was considerably increased in 1939, when the farm-account-record study was put on its present basis; hence the 1938 data are not strictly comparable with the 1939-41 data. However, the same cooperators and noncooperators used in 1938 are included in the 1939-1941 analyses.

Shifts in land use occurred during the 4-year period, with the cooperators making considerable change even though they had made adjustments previous to 1937. They increased the proportion of their tillable land in soil-building legumes from 16.2 percent in 1938 to 24.6 percent in 1941. Their revised land-use program places them in a better position to grow needed crops during the present war emergency period.

The trend in their crop yields was upward during the 4-year period, except for 1940, when crop yields of corn and soybeans were low and "spotted" in this area as a result of the serious drought during July and August (some scattered showers helped the crops on some of the farms). The noncooperators' yields declined during this same period, except for 1940 (Table 3). The crop-yield index (average yields for all account-keeping farms = 100) reflects the trend in yields on the two groups of farms. The land-use adjustments, improved land use and soil treatment, and the use of conservation practices are apparently resulting in increased yields on the cooperators' farms, but the "usual" system of farming on the noncooperators' farms is apparently resulting in relatively lower yields.

The amount of livestock production and livestock returns on the cooperating farms is increasing compared with that on the noncooperating ones. The conservation program has resulted in a larger production of improved legume hay and pasture, and the farmers are increasing their roughage-consuming livestock and getting higher livestock returns. The increased milk production on the conservation cooperating farms is an important contribution to the "food-for-freedom" goals.

When the amount of livestock on the two groups of farms and the price level is considered, horse and machinery costs and labor costs have not increased on the cooperating farms compared with those on the noncooperating ones. Purchases of limestone, phosphate, fertilizer, legume seeds, and materials for erosion-control structures were large in 1938, when the conservation program was in its earlier stages, but they have leveled off now. Purchases of these items increased in 1939 and 1941 on the noncooperators' farms, indicating that they are observing the benefits of the conservation practices and are beginning to see the need for them on their own farms.

The total farm-operating expenses in relation to the income on the cooperating farms have been comparable with those on the noncooperating ones since the major improvements necessary in the adoption of a conservation program have been made. During each of the past four years, the net receipts per farm and per acre on the former group have averaged above those on the latter. The data for

this area indicate that, although a temporary lowering of the farm income may occur during the first year or two of the program, its adoption on most farms eventually results in higher net farm incomes in addition to conserving and improving the soil and contributing to the maximum production of needed feed and food during a crisis such as the present war emergency period.

Land-Use-Capability Classes Related to Land Use and Other Factors

After the 99 farms were divided between cooperators and noncooperators, they were classified into three groups based on land-use-capability classes. The farms were placed in the class which contained the major proportion of their total land. (The cooperating farms in each class have proportionately slightly more land in the lower capability groups than the corresponding noncooperating ones.) This classification places the farms, insofar as possible, in groups which are physically comparable from the standpoint of the inherent capabilities of the land (soil type, percent of slope, degree of erosion, and susceptibility to erosion). An analysis of the resulting six groups is presented in Table 4, page 12.

The number of farms in some classes is small, and the averages for these groups do not have the statistical reliability of the averages of the other groups. However, all the farms tend to follow a uniform pattern, with those in Class III growing more hay and pasture and less grain crops than those in Class I, and with the cooperating farms excelling in soil-building legumes. A study of the cooperating farms in Table 4 shows that the conservation plan varies for the farms in the different land-use-capability classes and that the plan is adjusted to the physical and economic conditions of the farms and the personal characteristics of the farmers.

For the most part, the conservation program on the cooperating farms, compared with the lack of any definite plan on the other group of farms, is resulting in the conservation of soil and water resources, better land use, higher crop yields (considering soil productivity), increased livestock production, and favorable net farm incomes.

Crop Yields, Farming on the Contour, and Farming not on the Contour

In a comparison of yields of crops grown on the contour with those not grown on the contour, the productive capacity of the land varies between the different farms as well as on each individual farm. Soil type, slope, degree of erosion, and previous land use and land treatment create these differences in the productive capacity of the various fields and farms. The farmers who are progressive enough to farm their rolling land on the contour probably have followed other recommended practices and soil treatments that contribute to higher crop yields. Nevertheless, generally speaking the land on which the crops are grown on the contour is more rolling, is more severely eroded, and possesses lower inherent productivity.

On a limited number of farms, corn, oats, and soybean yields were secured on fields both on the contour (strip cropping, contour farming with terraces, contour farming with buffer strips, or contour farming the entire field with the same crop) and under the usual field system (Table 5, page 13). These

fields were comparable from the standpoint of land-use capability. On Class II land (land subject to moderate erosion) corn yields were 1.5 bushels per acre higher on contour-farmed land; on Class III land (land subject to severe erosion) it yielded 3.6 bushels more on the contour; on all classes, it yielded 2.2 bushels more on the contour. Nine farms had oats both on the contour and not on the contour; on these farms on all classes of land, oats yielded 12.4 bushels more on the contour. Only three farms had soybeans both on the contour and not on the contour; on these farms, the soybean yield averaged 6.8 bushels more on the contour. On most of the farms, crop yields of corn, oats, and soybeans were higher under contour cultivation than under the usual field system. One of the important reasons for these higher yields is that contour farming usually prevents a run-off of most of the rain that falls during the growing season and this increased moisture greatly aids the growing plant. The data clearly indicate that the best possible way for farmers operating rolling land to increase production of "food for freedom" is to farm all of their crop land on the contour.

The facts that only a relatively small number of records is available and that only one year's data (1941) are used limit the extent to which these data can be interpreted to indicate the increase in yields resulting from contour farming. Nevertheless, since the same trend was observed in the 1940 contour-yield tests, the evidence tends to verify our common-sense conclusion that contour farming is likely to result in higher yields than "up-and-down-hill" farming.

Contour Farming and Farm Operating Costs

In the LeRoy Project Area, 25 farms on which all or a considerable part of the farming operations were on the contour were matched (on the basis of size of farm, land-use-capability class, and type of farming) with 25 comparable neighboring farms on which none of the field operations were on the contour. In this way, the effect of contour farming on farm operating costs could be studied (Table 6, page 13). The results of this study show that horse and machinery costs and labor costs per crop acre were slightly lower on the farms not following contour farming and that total farm operating expenses were slightly higher. Since the contour-farming farms fed a larger amount of livestock, one would normally expect them to have higher operating expenses. Thus the data in 1941, as in 1940, indicate that contour farming, in addition to helping control erosion and increase crop yields, can, under most conditions, be performed at no increase in farm operating costs. Facts and figures prove that contour farming is the farmer's "triple-threat" weapon--it increases "food-for-freedom" production, aids in controlling erosion, and boosts net farm income.

Livestock Related to Soil Conservation

Livestock occupies an important position in a conservation program, especially since such a program frequently calls for the production of hay and pasture and since livestock offers the best means of utilizing such crops. Therefore, an economic study of soil conservation as it applies to the farm would not be complete without some consideration of the livestock enterprises which utilize the products of a planned program. Feed records were kept on the several livestock enterprises on the farms included in this study. An analysis of the feed records and the livestock enterprises, as kept in the farm account books, follows.

Dairy Enterprise

The hay and pasture produced under a soil-and-water conservation and erosion-control program usually must be utilized so that the farmers can secure the best returns from the farm. The major roughage-consuming class of livestock in this area is dairy cattle and dual-purpose cattle.

An analysis of the dairy enterprise (milk cows and young stock), including an average for the 17 herds, the 9 most profitable herds, and the 8 least profitable ones, is presented in Table 7, page 14. The most profitable herds, compared with the least profitable ones, produced approximately the same number of pounds of 3.5 milk per cow, but had lower feed costs, were fed less grain, and ate a larger proportion of high quality legume hay and legume pasture per animal unit. Careful selecting and culling of the dairy herd, plus the growing of high-quality hay and pasture as part of the conservation program and consequently the wise feeding of the dairy herd, has resulted in the owners being "prepared" to "shoot both barrels" during the war emergency period--the production of dairy products needed in the "food-for-freedom" program and the conservation of soil and water resources.

Beef Enterprise

The beef enterprise was a major cattle enterprise on 23 of the 99 farms included in this study. The type of beef enterprise varied, ranging from feeder cattle to beef breeding herds, and one or more milk cows were also kept on most of these farms (Table 8, page 14). Returns per \$100 worth of feed fed beef cattle were \$229 for the best herds and only \$128 for the poorest ones. These data indicate that farmers have not yet taken full advantage of the use of beef cattle as a means of marketing roughages produced under a conservation program.

Dual-Purpose Cattle Enterprise

On 43 of the farms, the cattle enterprise was of a dual-purpose nature. Table 9, page 15, presents an average of the 14 best herds, the 14 poorest herds, and all 43 herds. The size of the herds were relatively small. On the average, 47 percent of the cattle returns was from dairy returns and 53 percent, from beef returns. The most profitable herds had lower milk production per cow but produced more beef per animal unit than did the least profitable ones. The former group fed less feed per animal unit, but a larger proportion of their feed cost consisted of roughages. The returns from these herds indicate that a few farmers have used this class of livestock to a good advantage as a market for roughages. However, this class might be used to greater advantage in utilizing roughages produced as a result of a conservation program. (Table 9.)

Sheep Enterprise

On farms where the soil-and-water-conservation program calls for increased acreages of hay and pasture, sheep may be used advantageously to market some of the increased production of roughages and to serve as an additional source of farm income, as well as to produce meat and wool needed in the war effort.

Sheep were found on 20 of the 99 farms. The flocks were small, but on the average the sheep made good returns for the feed fed, particularly when approximately 75 percent of the value of their feed was from roughages, which have little or no market value. A wide variation was evident in the efficiency with which the sheep enterprise was conducted, the 10 best flocks having returns of \$199 for each \$100 worth of feed fed and the 12 poorest flocks having returns of \$128 (Table 10, page 15).

Hog Enterprise

Rotation-legume and mixed-legume pastures (which are a part of a good conservation program) play an important part in a swine sanitation program and also contribute toward lower feed costs in producing pork. The conservation co-operators utilized their improved legume pastures to provide swine sanitation and low-cost feed in producing more efficiently large quantities of pork, thus helping to meet the pork production goals.

An analysis of the hog enterprise on 88 of the farms raising hogs on the 29 farms having the most profitable hog enterprises, and on the 29 farms having the least profitable hog enterprises, is shown in Table 11, page 16. The most profitable enterprises were larger than the least profitable ones, and the former apparently secured more efficient gains. Their feed costs were \$3.40 for each 100 pounds of pork produced, and those for the least profitable enterprises were \$6.53 per 100 pounds of pork produced (Table 11).

Poultry Enterprise

In this area, particularly on the rougher farms where the adoption of a conservation program calls for a reduction in tilled crops and consequently a more extensive system of farming, the poultry enterprise fits in very well as a means of intensifying the farm business. Some of the more successful small rough farms in this area have a herd of cattle to utilize the hay and pasture and a substantial efficient poultry enterprise to supplement the farm income. Through such a program these farmers are able to utilize their soil resources and available operator and family labor efficiently, secure a modest income, and do their part in the war effort by increasing production of dairy and poultry products.

Only those flocks which were fed \$50 worth of feed or more during the year were included in the analysis of the poultry enterprise. The one-third most profitable flocks, the one-third least profitable flocks, and an average of all flocks are analyzed in Table 12, page 16. Returns from the poultry enterprise varied widely. High egg production per hen combined with efficient feeding and other factors of good poultry management paid dividends on the best flocks, and contribute to the "food-for-freedom" goals for increased egg production.

Summary

The planned soil conservation program, including the use of sound conservation practices, results in conserving soil and keeping it in shape for continued profitable production, and also increases crop yields per acre, livestock

production per farm, and net farm income--thus it is extremely important to farmers who are stepping up production as a result of the "food-for-freedom" program.

Conservation cooperating farms are securing higher crop yields through such practices as sound land use, soil-saving and improving rotations, use of available manure, application of limestone and phosphate, and such supporting practices as contouring, contour strip cropping, terracing, and the use of grass waterways. Most of these practices are now being put into effect by the conservation farmers themselves.

The records clearly indicate that for maximum "food-for-freedom" production and for the conservation of the soil, as well as for the benefit of the farmer's pocketbook, all sloping and rolling land should be farmed on the contour.

Since adopting conservation farming, the cooperating farmers on the average are growing more livestock and producing more milk, meat, and wool. They have a better balanced feed supply due to improved land use, higher feed-producing pastures, and higher crop yields. They are utilizing these feeds--roughages and concentrates--to produce needed livestock products and to increase farm income.

The farm-record studies on conservation cooperating and neighboring noncooperating farms indicate that farmers can contribute most to the war effort by adopting and following a sound, well-planned, soil-and-water-conservation and erosion-control program.

-9-

Table 1.--Investments, Cash Income, Cash Expenses, and Earnings, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1941

Item	Your farm	Average of all farms	69 farms cooperating	30 farms not cooperating
Number of farms - - - - -	--	99	69	30
<u>Capital Investments</u>				
Land- - - - -	\$	\$21 392	\$21 533	\$21 066
Farm improvements - - - - -		4 536	4 378	4 900
Livestock - - - - -		2 384	2 779	1 473
Feed and grain- - - - -		2 661	2 569	2 874
Machinery and equipment - - - - -		1 764	1 790	1 705
Total - - - - -	\$	\$32 737	\$33 049	\$32 018
<u>Cash Receipts</u>				
Farm improvements - - - - -	\$	\$ 3	\$ 3	\$ 3
Horses- - - - -		38	40	35
Productive livestock: Cattle- - - - -		1 473	1 933	415
Dairy sales - - - - -		412	438	352
Hogs- - - - -		1 324	1 559	784
Sheep - - - - -		92	117	35
Poultry - - - - -		116	130	87
Egg sales - - - - -		136	141	123
Total productive livestock- - - - -	()	(3 553)	(4 318)	(1 796)
Feed and grain- - - - -		2 424	2 102	3 165
Machinery and equipment - - - - -		218	239	169
Automobile (farm share) - - - - -		30	33	23
Labor off farm- - - - -		26	34	8
Miscellaneous - - - - -		4	4	2
AAA payments- - - - -		449	495	342
Total - - - - -	\$	\$ 6 745	\$ 7 268	\$ 5 543
<u>Cash Expenses</u>				
Farm improvements - - - - -	\$	\$ 283	\$ 264	\$ 328
Horses- - - - -		17	19	13
Productive livestock: Cattle- - - - -		647	821	248
Hogs- - - - -		80	92	53
Sheep - - - - -		12	15	2
Poultry - - - - -		30	33	23
Total productive livestock- - - - -	()	(769)	(962)	(326)
Feed and grain - - - - -		554	690	241
Machinery and equipment - - - - -		1 046	1 083	960
Automobile (farm share) - - - - -		182	194	155
Hired labor - - - - -		330	364	252
Miscellaneous - - - - -		26	26	25
Crop expense- - - - -		135	140	123
Livestock expense - - - - -		43	46	33
Taxes - - - - -		343	354	319
Total - - - - -	\$	\$ 3 728	\$ 4 141	\$ 2 775
<u>Summary</u>				
Cash balance- - - - -	\$	\$ 3 017	\$ 3 127	\$ 2 764
Farm products used in household - - - - -		258	263	247
Total inventory change- - - - -		2 265	2 363	2 040
Receipts less expenses- - - - -	\$	\$ 5 540	\$ 5 753	\$ 5 051
Total unpaid labor- - - - -		768	753	802
Returns for capital and management- - - - -	\$	\$ 4 772	\$ 5 000	\$ 4 249
Rate earned on investment - - - - -		% 14.49%	15.03%	13.19%

Table 2.--Factors Helping to Analyze the Farm Business, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1941

Item	Your farm	69 farms cooperating	30 farms not cooperating
Soil productivity rating ^{a/} - - - - -		2.55	2.15
Acres in farm - - - - -		228	220
Gross receipts per acre - - - - -	\$	\$34.86	\$31.23
Total expense per acre - - - - -		12.92	11.93
Net receipts per acre - - - - -	\$	\$21.94	\$19.30
<u>Investments</u>			
Value of land per acre - - - - -	\$	\$ 95	\$ 96
Total investments per acre - - - - -		146	146
<u>Land Use</u>			
Percent of land area tillable - - - - -		91.8	95.0
Percent of tillable land in crops - - - - -		75.8	79.4
Percent of tillable land in:			
Corn - - - - -		33.9	37.9
Oats - - - - -		20.6	22.1
Wheat - - - - -		1.1	.4
Soybeans - - - - -		8.0	10.4
Other crops - - - - -		3.4	2.3
Legume hay and pasture - - - - -		19.8	14.0
Nonlegume hay and pasture - - - - -		13.2	12.9
Soil-building legumes ^{b/} - - - - -		24.6	16.0
<u>Crop Yields</u>			
Corn, bu. - - - - -		68.7	61.6
Oats, bu. - - - - -		44.5	40.6
Soybeans, bu. - - - - -		25.9	24.4
Crop-yield index - - - - -		102.8	94.0
<u>Livestock Factors</u>			
Value of feed fed productive livestock - - -	\$	\$2 330	\$1 284
Returns per \$100 feed fed productive l. s. -		189	182
Number of cows milked - - - - -		6.0	5.5
Pounds of 3.5 milk per cow - - - - -		5 797	5 171
Returns per \$100 feed fed cattle - - - - -	\$	\$ 156	\$ 224
Number of litters farrowed - - - - -		12.0	7.4
Returns per \$100 feed fed hogs - - - - -	\$	\$ 232	\$ 219
Eggs per hen - - - - -		100	96
Returns per \$100 feed fed poultry - - - - -	\$	\$ 214	\$ 278
Lbs. of meat (beef, pork, and sheep) produced per acre - - - - -		137.9	68.2
Lbs. of 3.5 milk produced per acre - - - - -		153	129
<u>Expense Factors</u>			
Horse and machinery cost per crop acre - - -	\$	\$ 6.09	\$ 5.38
Man labor cost per crop acre - - - - -		7.04	6.26
Purchases of limestone, phosphate, fertilizer, and legume seeds - - - - -	\$	\$ 116	\$ 123
Percent participation in AAA program - - - - -	%	84.3%	66.7%

^{a/} Based on soil productivity. The most productive soil types on level topography and with no erosion are rated "1." Soil ratings range from 1, the best, to 10, the poorest.

^{b/} Include all biennial and perennial legumes and also soybeans and first-year sweet clover plowed under as a green manure crop.

Table 3.--Trends in Factors Helping to Analyze the Farm Business, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1938-1941

Item	Farms cooperating				Farms not cooperating			
	1938	1939	1940	1941	1938	1939	1940	1941
Number of farms - - - - -	39	71	71	69	33	39	36	30
Soil productivity ratings/- - - - -	2.85	2.53	2.55	2.55	2.78	2.18	2.22	2.15
Acres in farm - - - - -	227.6	226.0	219.8	227.9	177.6	205.0	209.1	220.2
<u>Land Use:</u>								
Percent of land area tillable - - - - -	90.2	90.4	90.9	91.8	93.0	92.6	93.8	95.0
Percent of tillable land in:								
Corn- - - - -	42.4	37.6	34.5	33.9	47.1	39.9	38.6	37.9
Oats- - - - -	23.7	18.6	17.6	20.6	26.6	19.1	18.0	22.1
Soybeans- - - - -	4.4	7.1	8.1	8.0	7.3	8.3	9.4	10.4
Other crops - - - - -	6.5	8.0	6.4	3.4	2.5	9.8	5.5	2.3
Hay and pasture - - - - -	23.0	28.7	33.4	33.0	16.5	22.9	28.5	26.9
Soil-building legumes - - - - -	16.2	20.0	27.8	24.6	8.9	10.2	17.7	16.0
<u>Crop Yields:</u>								
Corn, bu. - - - - -	54.6	61.4	46.3	68.7	48.4	55.2	43.9	61.6
Soybeans, bu. - - - - -	22.2	25.5	16.5	25.9	19.6	23.2	15.9	24.4
Crop-yield index- - - - -	105.4	104.6	102.2	102.8	92.8	91.7	96.0	94.0
Value of feed fed productive livestock- - - - -	\$1 169	\$1 572	\$1 854	\$2 330	\$ 692	\$ 822	\$ 871	\$1 284
Feed fed per acre to productive livestock - - - - -	5.14	6.95	8.43	10.22	3.90	4.01	4.17	5.83
Returns per \$100 feed fed productive livestock- - - - -	196	144	144	189	194	163	152	182
Percent of income from productive livestock - - - - -	49.9	43.0	57.1	52.6	40.0	30.1	30.8	31.0
Horse and machinery cost per crop acre- - - - -	\$ 4.15	\$ 4.52	\$ 4.46	\$ 6.09	\$ 3.98	\$ 3.85	\$ 4.23	\$ 5.38
Man labor cost per crop acre- - - - -	6.29	6.14	5.86	7.04	6.41	5.95	5.40	6.26
Purchases of limestone, phosphate, fertilizer, and legume seeds ^{b/-} - - - - -	179	79	75	116	61	75	75	123
Value of land per acre- - - - -	\$ 99	\$ 94	\$ 93	\$ 95	\$ 89	\$ 91	\$ 88	\$ 96
Total investment per acre - - - - -	145	140	144	146	127	132	133	146
Returns for capital and management- - - - -	\$1 723	\$2 510	\$2 139	\$5 000	\$ 894	\$1 756	\$1 615	\$4 249
Rate earned on investment - - - - -	5.2%	7.9%	6.76%	15.03%	4.0%	6.5%	5.82%	13.19%
Gross receipts per acre - - - - -	\$18.40	\$21.54	\$19.89	\$34.86	\$15.87	\$18.89	\$17.63	\$31.22
Total expenses per acre - - - - -	10.83	10.44	10.15	12.92	10.84	10.33	9.90	11.93
Net receipts per acre - - - - -	\$ 7.57	\$11.10	\$ 9.74	\$21.94	\$ 5.03	\$ 8.56	\$ 7.73	\$19.29

a/ Ranges from 1, the best, to 10, the poorest.

b/ Also includes materials for erosion-control structures.

Table 4.--Land-Use-Capability Classes as Related to Land Use and Other Factors,
Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project
Area, McLean County, Illinois, 1941

Item	Farms cooperating			Farms not cooperating		
	Class Ia/ 5 1.8 204.8	Class II/ 41 2.3 240.4	Class III/ 23 3.3 200.2	Class I/ 7 2.0 203.1	Class II/ 19 2.1 230.2	Class III/ 4 2.9 202.4
<u>Land Use:</u>						
Percent of land area tillable- - - - -	94.9	91.8	91.1	95.6	95.2	92.6
Percent of tillable land in:						
Corn - - - - -	33.9	35.3	30.7	41.3	37.2	35.9
Oats - - - - -	23.1	20.7	19.7	25.4	21.2	21.3
Wheat - - - - -	1.8	.8	1.5	--	.5	--
Soybeans - - - - -	12.8	8.7	5.4	6.9	12.3	6.2
Other crops - - - - -	--	3.8	3.2	4.5	2.1	--
Hay and pasture - - - - -	28.4	30.7	39.5	21.9	26.7	36.3
Soil-building legumes - - - - -	20.2	23.2	28.6	17.6	16.9	7.7
<u>Crop Yields:</u>						
Corn, bu. - - - - -	70.8	70.6	63.4	63.2	63.0	49.8
Wheat, bu. - - - - -	27.9	26.8	21.8	20.9	24.9	24.8
Crop-yield index - - - - -	104.0	107.1	92.0	92.0	96.9	80.5
Feed fed per acre to productive livestock - - - - -	\$10.79	\$10.87	\$10.85	\$ 7.20	\$ 6.59	\$ 5.99
Returns per \$100 feed fed productive 1. s. - - - - -	171	184	179	121	184	195
Percent of income from productive 1. s. - - - - -	48.0	51.9	59.2	16.5	34.3	37.2
Lbs. of milk and meat produced per acre - - - - -	408	279	304	188	197	215
Horse and machinery cost per crop acre - - - - -	\$ 6.21	\$ 6.03	\$ 6.20	\$ 4.40	\$ 5.69	\$ 5.61
Man labor cost per crop acre - - - - -	6.02	6.67	8.18	5.83	6.31	6.87
Purchases, of limestone, phosphate, fertilizer, and legume seeds - - - - -	73	126	103	106	139	79
Value of land per acre - - - - -	\$ 102	\$ 99	\$ 87	\$ 94	\$ 99	\$ 81
Total investment per acre - - - - -	\$ 164	\$ 146	\$ 136	\$ 139	\$ 153	\$ 122
Returns for capital and management - - - - -	\$4 775	\$6 068	\$3 615	\$3 683	\$4 747	\$2 877
Rate earned on investment - - - - -	14.25%	17.27%	13.25%	13.06%	13.46%	11.63%
Gross receipts per acre - - - - -	\$36.86	\$38.64	\$30.50	\$29.47	\$32.87	\$25.45
Total expenses per acre - - - - -	13.54	13.40	12.44	11.34	12.25	11.24
Net receipts per acre - - - - -	\$23.32	\$25.24	\$18.06	\$18.13	\$20.62	\$14.21

a/ Farms were placed in the class in which the major part of their land fell. The classes designate land as follows:

I, suitable for cultivation without special conservation practices; II, suitable for cultivation with simple conservation practices; III, suitable for cultivation with intensive conservation practices.

b/ Ranges from 1, the best, to 10, the poorest.

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Table 5.--Average Yields per Acre on the Contour and Not on the Contour, on the Same Farms, LeRoy Project Area, McLean County, Illinois, 1941

Item	Farms by land-use-capability classes		All farms
	Class IIA/	Class IIIB/	
Corn:			
Number of farms- - - - -	12	7	19
Acres on contour - - - - -	291	131	422
Acres not on contour - - - - -	643	334	977
Yield per acre of corn on contour (bu.)- -	65.1	67.9	66.0
Yield per acre of corn not on contour (bu.)	63.6	64.3	63.8
Number of farms on which corn on contour yielded the highest- - - - -	9	6	15
Oats:			
Number of farms- - - - -	6	3	9
Acres on contour - - - - -	124.1	42.9	167.0
Acres not on contour - - - - -	167.1	77.5	244.6
Yield per acre of oats on contour (bu.)- -	50.0	47.3	49.8
Yield per acre of oats not on contour (bu.)	37.1	38.0	37.4
Number of farms on which oats on contour yielded the highest- - - - -	5	3	8
Soybeans:			
Number of farms- - - - -	2	1	3
Acres on contour - - - - -	6.6	1.9	8.5
Acres not on contour - - - - -	35.0	4.5	39.5
Yield per acre of soybeans on contour (bu.)	40.6	13.2	34.5
Yield per acre of soybeans not on contour (bu.)- - - - -	29.7	12.2	27.7
Number of farms on which soybeans on contour yielded the highest- - - - -	2	1	3

a/ Class II land is sloping and is subject to moderate erosion. It is suitable for cultivation with simple conservation practices.

b/ Class III land is rolling and is subject to severe erosion. It is suitable for cultivation with intensive conservation practices.

Table 6.--Farm Operating Costs on the Contour and Not on the Contour,^{a/} LeRoy Project Area, McLean County, Illinois, 1941

Item	25 farms contour farming	25 farms not contour farming
Size of farm--acres - - - - -	224.5	223.5
Percent of land area tillable - - - - -	91.8	94.2
Crop acres per farm - - - - -	151.8	156.6
Feed fed per acre - - - - -	\$ 9.36	\$ 8.95
Horse and machinery cost per crop acre- - - - -	6.24	6.10
Man labor cost per crop acre- - - - -	7.08	7.01
Total farm expenses per acre- - - - -	\$12.73	\$13.20

a/ Farms farming on the contour (strip cropping, contour farming with terraces, contour farming with buffer strips, or contour farming with the same crop) matched with farms not farming on the contour (matched on the basis of size of farm; land-use-capability class, including soil type, topography, and degree of erosion; type of farming; and amount of livestock, labor, machinery, and equipment).

Table 7.--Dairy Enterprise, LeRoy Project Area, McLean County,
Illinois, 1941

Item	Your farm	Average of all herds	Returns per \$100 feed fed	
			Average of best herds	Average of poorest herds
Number of farms- - - - -	--	17	9	8
Number of cows milked- - - - -	_____	10.5	10.9	10.1
Number of animal units - - - - -	_____	14.2	13.8	14.7
Percent of cattle units milked - - -	_____	74.0	79.0	68.8
Value of feed fed- - - - -	\$ _____	\$ 666	\$ 518	\$ 832
Dairy sales- - - - -	_____	1 026	1 084	960
Total returns from cattle- - - - -	_____	1 481	1 573	1 377
Returns per \$100 feed fed- - - - -	_____	\$ 222	\$ 303	\$ 166
Percent of total cattle returns from dairy sales - - - - -	_____	69.3	68.9	69.7
Pounds of 3.5 milk per cow - - - - -	_____	6 644	6 644	6 645
Dairy sales per 100 lb. milk produced	\$ _____	\$ 1.47	\$ 1.50	\$ 1.42
Feed cost per 100 lb. milk produced	_____	.95	.72	1.24
Feed fed per animal unit (lb.)	_____	_____	_____	_____
Grain- - - - -	_____	1 859	1 349	2 395
Supplement - - - - -	_____	84	90	78
Hay- - - - -	_____	3 122	2 827	3 393
Silage - - - - -	_____	74	--	153
Pasture days - - - - -	_____	192	184	200
Percent of total feed value	_____	_____	_____	_____
Concentrates - - - - -	_____	50.0	46.4	52.6
Roughages- - - - -	_____	50.0	53.6	47.4

Table 8.--Beef Enterprise, LeRoy Project Area, McLean County,
Illinois, 1941

Item	Your farm	Average of all herds	Average of best herds ^{a/}	Average of poorest herds ^{a/}
Number of farms- - - - -	--	23	11	12
Number of animal units - - - - -	_____	36.0	35.1	36.8
Total feed fed cattle- - - - -	\$ _____	\$ 2 286	\$ 1 725	\$ 2 800
Returns from beef- - - - -	_____	3 350	3 531	3 134
Total returns from cattle- - - - -	_____	3 758	3 955	3 578
Returns per \$100 feed fed cattle - - -	\$ _____	\$ 164	\$ 229	\$ 128
Percent of total cattle returns from beef- - - - -	_____	89.1	89.3	89.0
Pounds of beef produced- - - - -	_____	28 002	27 101	34 829
Returns per 100 lb. produced - - - -	\$ _____	\$ 13.42	\$ 14.59	\$ 12.41
Feed cost per 100 lb. produced - - - -	_____	8.16	6.37	9.71
Feed fed per 100 lb. of beef pro- duced (lb.)	_____	_____	_____	_____
Grain- - - - -	_____	544	422	650
Supplement - - - - -	_____	28	22	33
Hay- - - - -	_____	234	218	247
Silage - - - - -	_____	92	--	172
Pasture days - - - - -	_____	4.0	4.0	4.0
Percent of total feed value	_____	_____	_____	_____
Concentrates - - - - -	_____	82.3	84.1	81.3
Roughages- - - - -	_____	17.7	15.9	18.7

a/ Based on returns per \$100 feed fed.

Table 9.--Dual-Purpose Cattle Enterprise, LeRoy Project Area,
McLean County, Illinois, 1941

Item	Your farm	Average of all herds	Average of best herds ^{a/}	Average of poorest herds ^{a/}
Number of farms- - - - -	--	43	14	14
Number of cows milked- - - - -	_____	5.1	5.6	4.9
Number of animal units - - - - -	_____	10.8	9.2	12.4
Percent of cattle units milked - - -	_____	47.3	60.1	39.1
Value of feed fed- - - - -	\$ _____	\$ 521	\$ 286	\$ 787
Dairy sales- - - - -	_____	372	343	371
Total returns from cattle- - - - -	_____	798	696	886
Returns per \$100 feed fed- - - - -	_____	\$ 153	\$ 243	\$ 113
Percent of cattle returns from				
Dairy- - - - -	_____	47	49	42
Beef - - - - -	_____	53	51	58
Pounds of 3.5 milk per cow - - - -	_____	4 728	4 310	5 259
Pounds of beef produced- - - - -	_____	5 013	6 077	4 301
Pounds of beef produced per animal unit- - - - -	_____	463	657	345
Feed fed per animal unit (lb.)				
Grain- - - - -	_____	2 102	1 215	2 954
Supplement - - - - -	_____	30	15	52
Hay- - - - -	_____	3 273	1 861	4 343
Silage - - - - -	_____	13	46	--
Pasture days - - - - -	_____	172	155	181
Percent of total feed value				
Concentrates - - - - -	_____	50.5	42.8	54.1
Roughages- - - - -	_____	49.5	57.2	45.9

^{a/} Based on returns per \$100 feed fed.

Table 10.--Sheep Enterprise, LeRoy Project Area,
McLean County, Illinois, 1941

Item	Your farm	Average of all droves	Average of best droves ^{a/}	Average of poorest droves ^{a/}
Number of farms- - - - -	--	20	10	10
Number of animal units ^{b/} - - - - -	_____	6.6	7.4	5.8
Value of feed fed sheep- - - - -	\$ _____	\$ 189	\$ 198	\$ 180
Total returns from sheep - - - - -	_____	311	394	229
Returns per \$100 feed fed- - - - -	\$ _____	\$ 165	\$ 199	\$ 128
Pounds of lamb and mutton produced -	_____	4 672	2 944	1 728
Returns per 100 lb. produced - - - -	\$ _____	\$13.34	\$13.37	\$13.28
Feed cost per 100 lb. produced - - -	_____	8.09	6.73	10.40
Feed fed per 100 lb. produced (lb.)				
Grain- - - - -	_____	170	104	282
Supplement - - - - -	_____	1	1	--
Hay- - - - -	_____	333	318	359
Pasture days - - - - -	_____	61.9	44.4	91.8
Percent of total feed value				
Concentrates - - - - -	_____	24.8	17.5	32.7
Roughages- - - - -	_____	75.2	82.5	67.3

^{a/} Based on returns per \$100 feed fed.

^{b/} Five mature sheep or 10 to 15 lambs or feeders, depending on size, equal one animal unit.

Table 11.--Hog Enterprise, LeRoy Project Area,
McLean County, Illinois, 1941

Item	Your farm	Average of all herds	Average of one-third best herds ^{a/}	Average of one-third poorest herds ^{a/}
Number of farms- - - - -	--	88	29	29
Total feed fed hogs- - - - -	\$ _____	\$ 814	\$ 653	\$ 655
Total returns from hogs- - - - -	_____	1 825	2 079	949
Returns per \$100 feed fed- - - - -	\$ _____	\$ 224	\$ 318	\$ 145
Pounds of pork produced- - - - -	_____	16 693	19 222	10 032
Returns per 100 lb. produced - - - -	\$ _____	\$ 10.93	\$ 10.81	\$ 9.46
Feed cost per 100 lb. produced - - -	_____	4.88	3.40	6.53
Number of pigs farrowed- - - - -	_____	97	98	59
Number of pigs weaned- - - - -	_____	78	84	42
Number of litters farrowed - - - - -	_____	12	13	7
Number of pigs weaned per litter - -	_____	6.6	6.6	6.0
Feed fed per 100 lb. produced (lb.)	_____			
Grain- - - - -	_____	367	238	525
Supplement - - - - -	_____	31	22	43
Pasture days - - - - -	_____	1.0	1.7	1.6
Total purchases of hogs- - - - -	\$ _____	\$ 87	\$ 117	\$ 43
Total sales of hogs- - - - -	_____	\$ 1 412	\$ 1 628	\$ 741

a/ Based on returns per \$100 feed fed.

Table 12.--Poultry Enterprise, LeRoy Project Area,
McLean County, Illinois, 1941

Item	Your flock	Average of all flocks	Average of one-third best flocks ^{a/}	Average of one-third poorest flocks ^{a/}
Number of flocks - - - - -	--	73	24	24
Total feed fed poultry - - - - -	\$ _____	166	105	184
Total returns from poultry - - - - -	_____	\$ 345	\$ 362	\$ 258
Returns per \$100 feed fed- - - - -	\$ _____	\$ 208	\$ 344	\$ 140
Average number of hens - - - - -	_____	101	82	92
Eggs per hen - - - - -	_____	105	105	88
Returns per hen- - - - -	\$ _____	\$3.42	\$4.40	\$2.69
Feed cost per hen- - - - -	_____	1.65	1.28	1.92
Feed cost per dozen eggs - - - - -	_____	.19	.15	.26
Feed fed per hen (lb.)	_____			
Farm grains - - - - -	_____	96	72	118
Purchased concentrates - - - - -	_____	22	17	31
Total pounds - - - - -	_____	118	89	149

a/ Based on returns per \$100 feed fed.



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